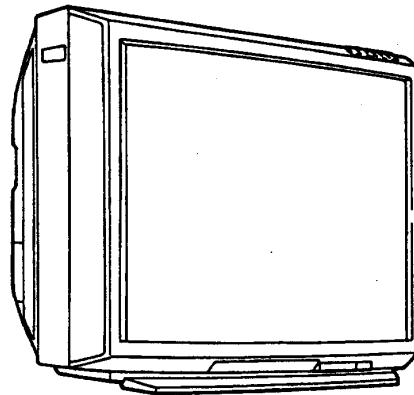


KV-K21MN11/K25MN11
RM-845T RM-845P
KV-K29MH11/K29MN11
RM-845 RM-845P

SERVICE MANUAL



ME Model

KV-K21MN11
Chassis No. SCC-G37B-A
KV-K25MN11
Chassis No. SCC-G37A-A

HK Model

KV-K29MH11
Chassis No. SCC-G43A-A

GE Model

KV-K29MN11
Chassis No. SCC-G44A-A

EX Model

KV-K21MN11
Chassis No. SCC-G50A-A
KV-K25MN11
Chassis No. SCC-G50B-A

G3F CHASSIS

MODELS OF THE SAME SERIES	
KV-K21MN11/K25MN11	
KV-K29MH11/K29MN11	



TRINITRON® COLOR TV
SONY®

SPECIFICATIONS

Specifications	KV-K21MN11	KV-K25MN11	KV-K29MN11 KV-K29MH11	Note
Power requirements	110-240 V AC, 50/60 Hz			
Power consumption (W)	135	165	171	
Television system	B/G, I, D/K, M			
Color system	PAL, PAL 60, SECAM, NTSC4.43, NTSC3.58			
Stereo system	NICAM Stereo B/G, I ; A2 Stereo (Germany) B/G			
Channel coverage				
B/G	VHF : E2 to E12 / UHF : E21 to E69 / CATV : S01 to S03, S1 to S41			
I	UHF : B21 to B68			
D/K	VHF : R1 to R12 / UHF : R21 to R60			
M	VHF : A2 to A13 / UHF : A14 to A79 A-8 to E, G to W+25, W+27 to W+84			
Antenna	75-ohm external antenna terminal for VHF/UHF			
Audio output (speaker)	7W x 2	13W x 2	13W x 2	
Number of terminal				
Video	Input : 3 Output : 1			
Audio	Input : 3 Output : 1			
S1-Video	Input : 2			Y : 1 Vp-p, 75 ohms, unbalanced, sync negative C : 0.286 Vp-p, 75 ohms
Picture tube	Super Trinitron			
Tube size (inch)	21	25	29	Measured diagonally
Screen size (cm)	54	60	68	Measured diagonally
Dimensions (w/h/d, mm)	550 x 455 x 473	619 x 514 x 500	694 x 578 x 527	
Mass (kg)	25.5	37.5	50	
Accessories				
Supplied	Remote commander (1)			
	Size R6 (AA) battery (1)			
Optional	TV stand SU-K1G			
	Magic commander RM-829, RM-848			

Design and specifications are subject to change without notice.

Sony Corporation Tokyo, Japan

CAUTION

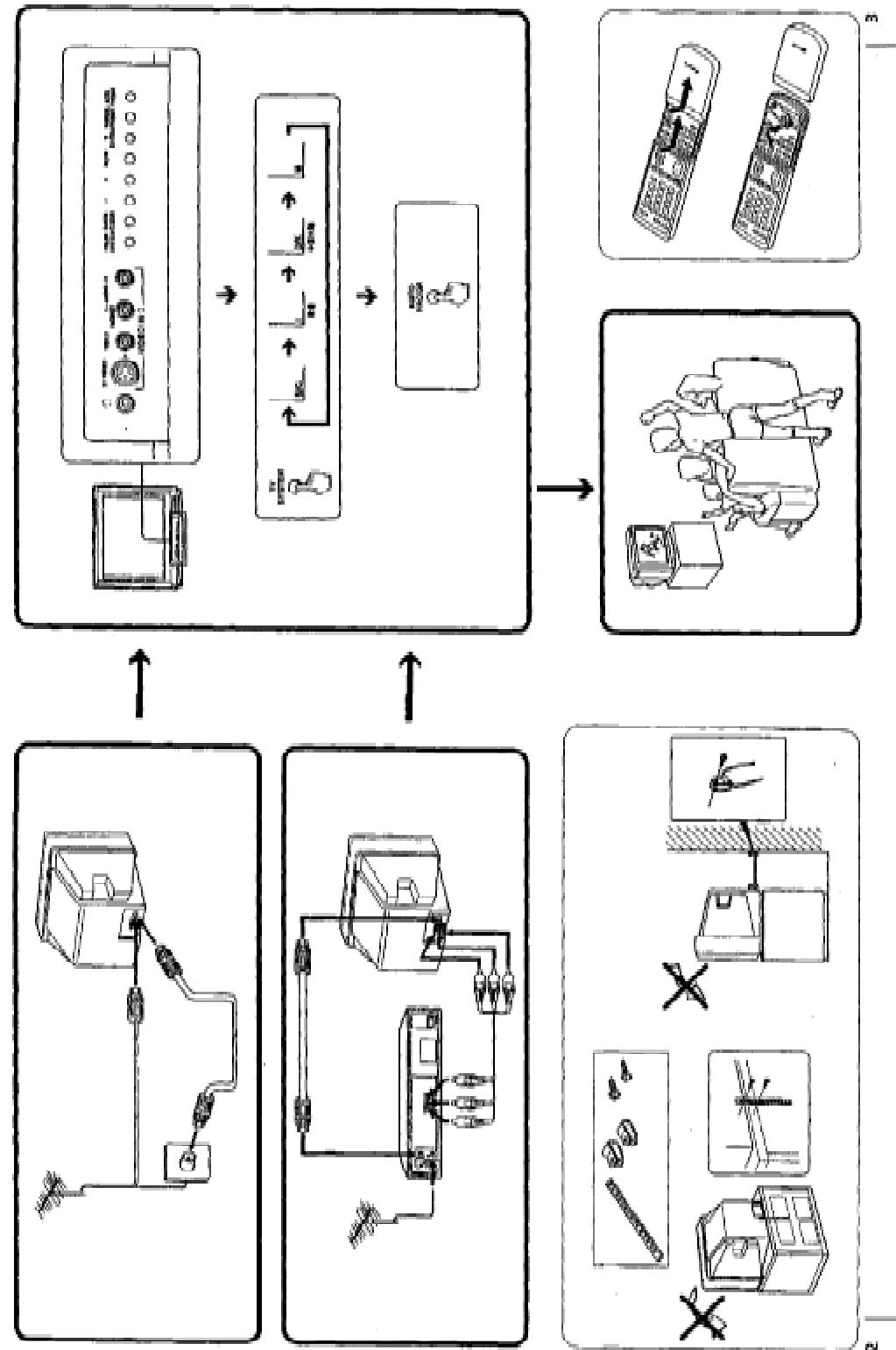
SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1
GENERAL

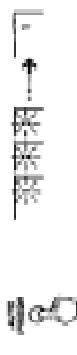
The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



1-1. HOOKING UP

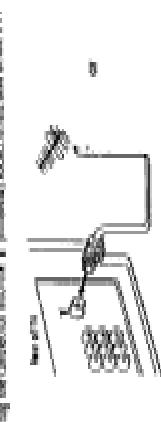
1-2. PRESETTING CHANNELS

3 Press AUTO POS.



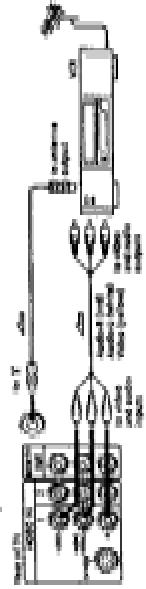
Connecting a VHF antenna or a combination VHF/UHF antenna
 Attach an optional SC antenna connector to the SC connector on the TV.
 — 75-ohm coaxial cable (bundled)

Plug the connector into the VHF/UHF antenna terminal on the TV.



Hooking up to optional equipment

You can connect optional audio/video equipment to this TV such as VCR, and also play, connect, reproduce, or edit, etc.



When connecting a component video, make sure the video signal is output to the TV. (Refer to page 11.)
 ① Connect the video signal to the S-video input.
 ② Connect the S-video signal to the S-video input.
 ③ Connect the component video signal to the component video input.

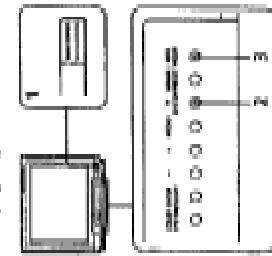
5

You can preset TV channels easily by pressing all the numbered channels simultaneously. You can also preset channels manually or through program position.

4 Press AUTO POS.

Presenting channels automatically

Press preset up to set TV channels in numerical sequence from program position 1.

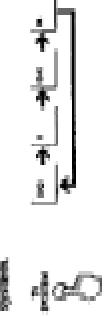


1 Press MAIN POWER.



When the TV is in standby mode after pressing the SC POWER, press POWER from the TV or remote controller.

2 Press the PRESET button to select your local TV system.



Recording with the TV is supported for each program.

6

Presenting channels manually

To change the program position for a channel or to change a channel while watching, press the channel manually.

Example: If you want to change in program position 3

1 Press MANUAL PRESET.

2 Press PRESET + or - until the channel.

To change the program position for a channel or to change a channel while watching, press the channel manually.

Example: If you want to change in program position 3

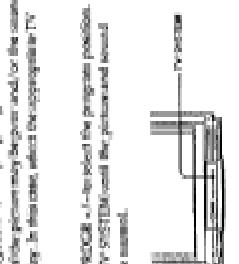
5 Press MANUAL PRESET.

6 Repeat steps 1 to 5.

If the TV system is not properly selected, the other performance by power and/or the sound may become to abnormal, when the option input or TV option.

1 Press PRESET + or - to select the program position.

2 Press the PRESET button to select your local TV system.



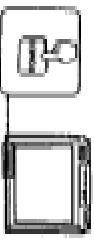
Recording with the TV is supported for each program.

5

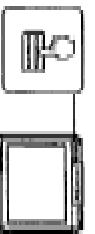
1-5. WATCHING THE TV

Switching off the TV

To switch off the TV automatically, press POWER.

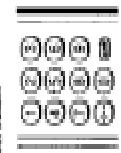


1 Press **POWER** to turn the TV on.



When the TV's standby mode after pressing **POWER**, press **POWER** on the TV or remote commander.

2 Select the TV channel you want to watch.
Press a number button.



To select a one-digit channel, press "1" before the number button.
For example, to select channel 25, press "1" + "2" + "5".



To select a three-digit channel, press "1" + "0" before the number button.
For example, to select channel 25, press "1" + "0" + "2" + "5".



3 Press **POWER** to switch the TV on.



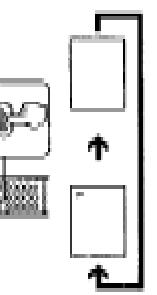
Muting the sound

Press **MUTE**.



Displaying on-screen information

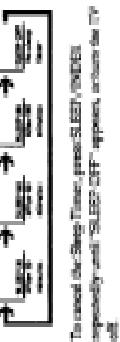
Press **DISPLAY**.



Setting the Sleep Timer

You can set the TV to turn off automatically after the length of time you specify.

Press **SLEEP/TIMER**.



The second and Sleep Timer buttons light up.

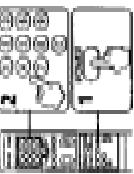
Press **SLEEP/TIMER** again to switch the TV off.

10' (10 min)

5

1-6. SETTING THE REMOTE COMMAND MODE

You can use the supplied remote commander to operate this TV and Sony video equipment, such as a VCR or other Sony video player. To operate Sony video equipment, first set the remote command mode to the video equipment you want to use.

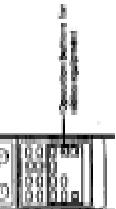


1 Press and hold the **MODE** button.

2 Press the number button that corresponds to the remote command mode.

Mode Number	Remote command mode
1	VTR (VHS, VHSII or VHS-C)
2	VCR (SVHS, S-VHS, VHS-C)
3	VTR (VHS, VHSII or VHS-C)
4	Hi-Fi (Multi Disc System)

3 Operating the remote commander from the following buttons to operate the video equipment.

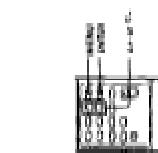


1-7. ADJUSTING THE PICTURE

Adjusting the picture precisely

You can adjust the picture quality precisely with the **AUTO STYLING** system. The adjusted settings are stored in the **PERSONAL** option.

1 Press MENU.



1 Press MENU.



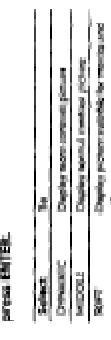
2 Press **J+ or T-** to move the cursor **(P)** to **VIDEO CONTROL**, and press ENTER.



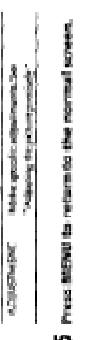
3 Press **J+ or T-** to move the cursor **(P)** to **PICTURE**, and press ENTER.



4 Press **J+ or T-** to move the cursor **(P)** to **PERSONAL**, and press ENTER.



5 Press **J+ or T-** to select the items, and press ENTER.



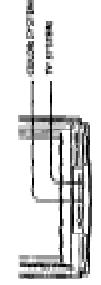
6 No adjust other items, repeat steps 4 and 5.



7 Press MENU to return to the normal screen.

1-8. ADJUSTING THE SOUND

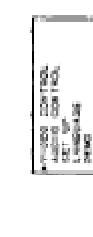
If the color of the picture is abnormal when viewing programs through the Y terminal, press **TV STYLING** on COLOR/SYNTHERIC and the color becomes normal.



Note
 • Normally on COLOR/SYNTHERIC



1 Press MENU.



2 Press **J+ or T-** to move the cursor **(P)** to **AUDIO CONTROL**.



3 Press ENTER.



4 Press **J+ or T-** to select the sound that you want, and press ENTER.



5 Press MENU to return to the normal screen.

6 Press **J+ or T-** to select the sound that you want, and press ENTER.



7 Press MENU to return to the normal screen.

1-11. VIEWING TELETEXT

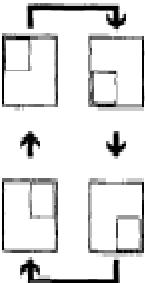
Swapping pictures between the main and PIP screens

Press SWAP.



Changing the position of the PIP screen

Press POSITION.



Freezing the PIP screen

To recover the normal picture, press FREEZE again.

Notes

- When you display a PIP screen on the TV screen, a separate control screen will appear on the PIP screen for operating the PIP screen. The screen will be automatically switched to the control screen when the PIP screen is not used.
- If you display different programmes on the PIP screen, PIP is displayed at the top-left corner of the screen.
- If the screen is not used for a long time, the PIP screen may be moved to the bottom of the TV screen.

Freezing the TV screen

To recover the normal picture, press FREEZE again.

Notes

- When you display a PIP screen on the TV screen, a separate control screen will appear on the PIP screen for operating the PIP screen. The screen will be automatically switched to the control screen when the PIP screen is not used.
- If you display different programmes on the PIP screen, PIP is displayed at the top-left corner of the screen.

Displaying Teletext

1 Select a TV channel which carries the teletext broadcast you want to watch.

- 2 Press HOLD to display the teletext.

A selected page is displayed. Normally, the 1st page (page 1) is displayed at the top-left corner of the screen. To cancel the teletext display, press TV.

Superimposing a teletext page on the TV picture

To select a page:

Press TELET.

Each time you press TELET, the screen changes as follows:

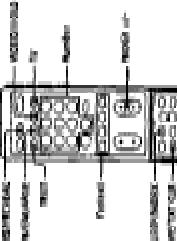
Teletext → Teletext and TV → TV

Checking the contents of a teletext service

Press SUBTITLE to display an overview of the teletext contents and page numbers.

Using Fastext

This feature allows you to quickly screen a different page than page 1 (main). When a selected page is displayed, a color-coded menu appears at the bottom of the screen. The colors of the menu correspond to the colors of the RED, GREEN, YELLOW, and CYAN buttons on the remote control. These color buttons function as the Selection buttons in fastext mode.



Displaying Teletext

1 Entering the teletext display

Press ADJUST/SELECT.

Each time you press ADJUST/SELECT, the selection display changes as follows:

Selection → Billing → Normal text

2 Waiting for a teletext page while watching a TV programme

1 Wait in the page number of the teletext that you want to refer, then press TIME/CUR.

2 When the page number is displayed on the screen, press TELET to switch the teletext on.

Selecting a teletext page

To select the other button which corresponds to the selected page, press the number buttons. The page is displayed after a few seconds.

1 Selecting the next or previous page

To repeat the three-digit page number of the teletext page, press the number buttons. If you have more than one, key in the correct page number again.

2 Accessing the next or previous page

Press HOLD/SELECT. A second page may consist of several subpages. You can switch page scrolling in order to read the next or previous page.

Press HOLD/SELECT.

The HOLD symbol "H" is displayed at the top-left corner of the screen.

To resume normal teletext operation, press TELET.

1-12. CUSTOMIZING THE TV (SET UP)

Using the AV OUT (balanced) terminal

Source-select the output signal from the MONITOR OUT port of the rear of the TV to the TV signal on the signal of the program you are watching (see monitor).

1 Press MENU.

2 Press Δ or ∇ to select SET UP, and press ENTER.



3 Press Δ or ∇ to select AV OUT, and press ENTER.



4 Press Δ or ∇ to select the output signal, and press ENTER.



5 Press Δ or ∇ to select SET UP, and press ENTER.

Producing the mobile off the picture

When this is selected, the mobile is recorded in a test field. This is useful for producing a mobile off the picture when the TV is connected to a VCR or camcorder, and recording the TV programme. Otherwise, the mobile may damage the character on the screen.

1 Press MENU.

2 Press Δ or ∇ to select SET UP, and press ENTER.

3 Press Δ or ∇ to select MOBILE, and press ENTER.

4 Press Δ or ∇ to select MOBILE OFF, and press ENTER.

Note

- When the programme is recorded in a mobile off, the mobile is recorded in a test field. This is useful for producing a mobile off the picture when the TV is connected to a VCR or camcorder, and recording the TV programme. Otherwise, the mobile may damage the character on the screen.

Adjusting the tilt of the picture

■ ADJUSTMENT (TILT ADJUST) 1 only

You can adjust the tilt of the picture if it is not aligned to the TV screen. This happens when there is the TV is not connected with sufficient magnetic field.

1 Press MENU.

2 Press Δ or ∇ to select SET UP, and press ENTER.



3 Press Δ or ∇ to select TILT ADJUST, and press ENTER.



4 Press Δ or ∇ to turn the surround sound on/off, and press ENTER.



5 Press Δ or ∇ to turn the mobile off the picture on/off, and press ENTER.



6 Press MENU.

7 Press Δ or ∇ to select SET UP, and press ENTER.



8 Press Δ or ∇ to select MOBILE, and press ENTER.



9 Press Δ or ∇ to turn the mobile on/off, and press ENTER.



Selecting the surround sound

You can enjoy a surround sound effect that is like being in a movie hall when watching stereo signals.

1 Press MENU.

2 Press Δ or ∇ to select SET UP, and press ENTER.



3 Press Δ or ∇ to select SURROUND, and press ENTER.



4 Press Δ or ∇ to turn the surround sound on/off, and press ENTER.



5 Press Δ or ∇ to turn the mobile off the picture on/off, and press ENTER.



6 Press MENU.

7 Press Δ or ∇ to select SET UP, and press ENTER.



8 Press Δ or ∇ to select MOBILE, and press ENTER.



9 Press Δ or ∇ to turn the mobile on/off, and press ENTER.



Additional Information

1-13. TROUBLESHOOTING

Good picture
No sound



→ Check the TV SRS TEST setting.

Good picture
No sound



→ Press MAIN POWER.



→ Press IRCODE.



→ Check the antenna connection.



→ Check the VCR connection.



→ Press VOLUME +.



→ Press MUTE.



→ Press MUTE/UNMUTE.

→ No color



→ The image is caused by local interference (fog, sun, rain, signs, hair dryer, etc.).

→ Adjust the CLOUDS item in the VIDEO CONTROL menu in AUTOMATIC option.

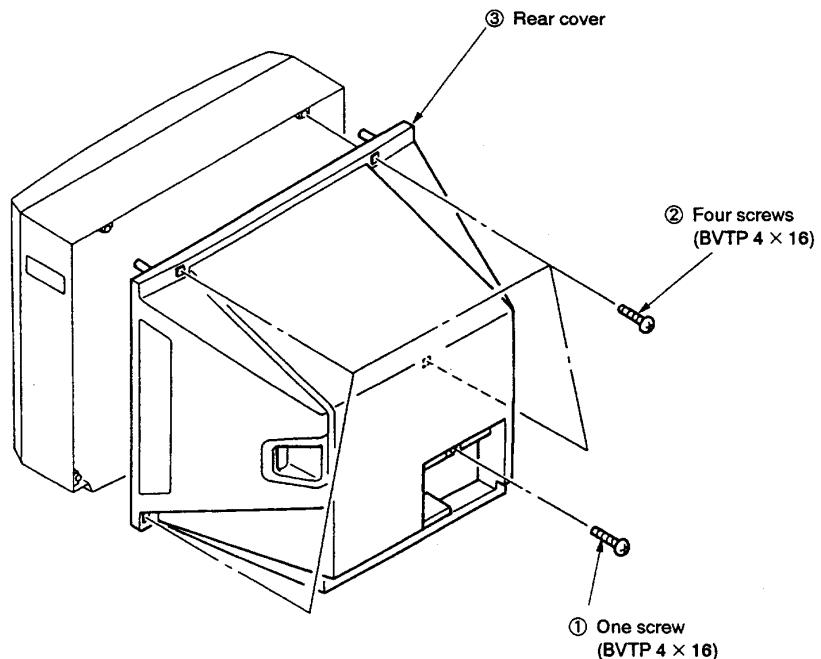
Double images or "ghosts."



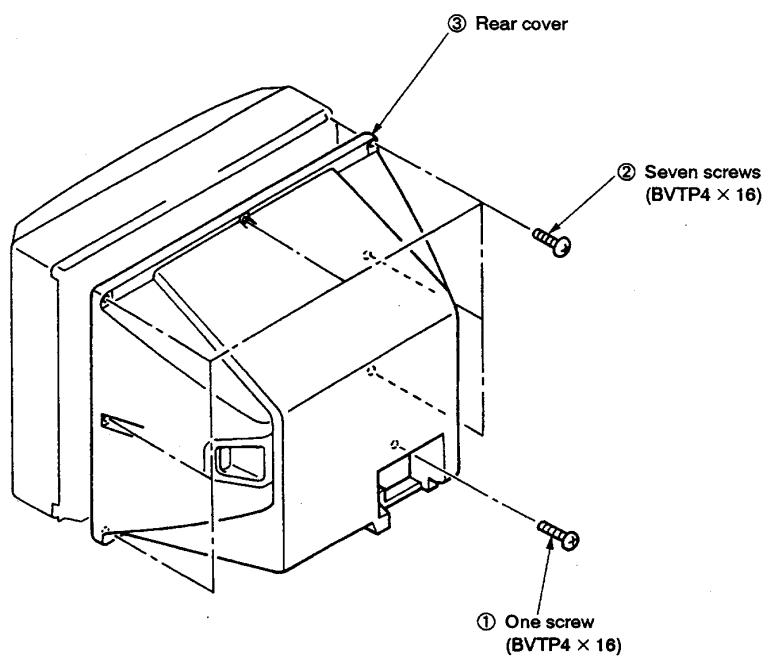
→ The image is caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.

SECTION 2 DISASSEMBLY

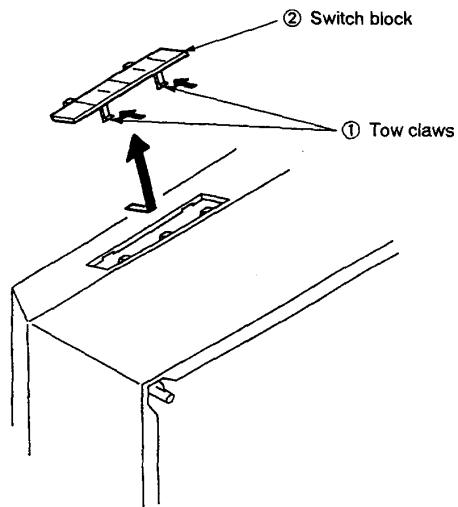
2-1. REAR COVER REMOVAL (KV-K21MN11 only)



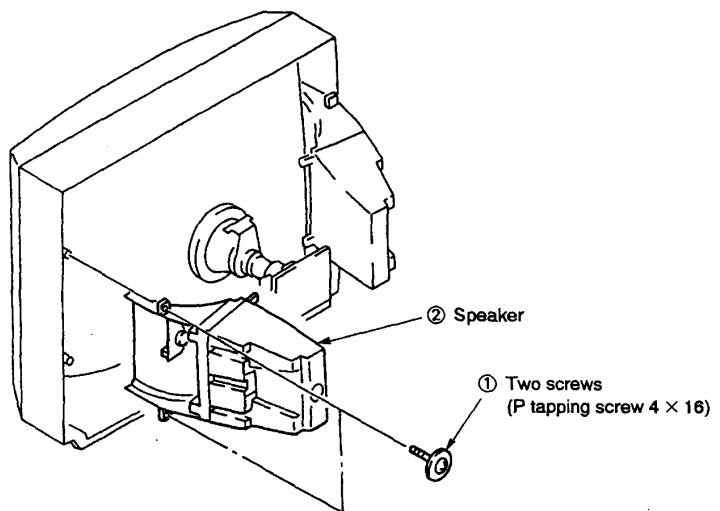
2-1. REAR COVER REMOVAL (KV-K25MN11/K29MN11/K29MH11 only)



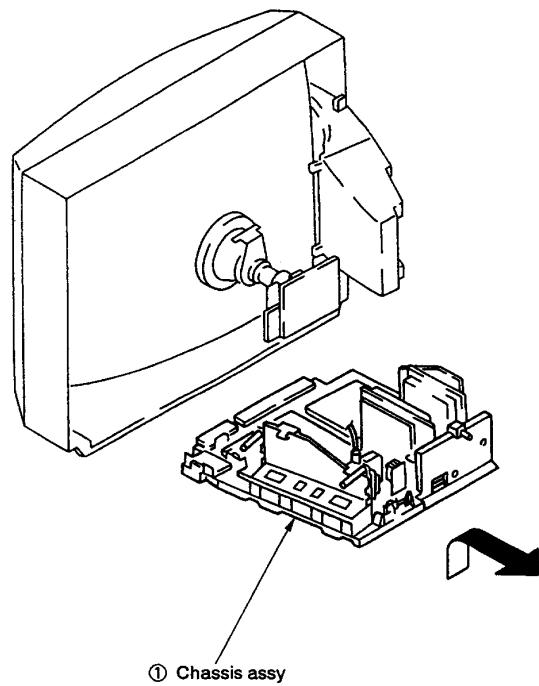
2-2. SWITCH BLOCK REMOVAL



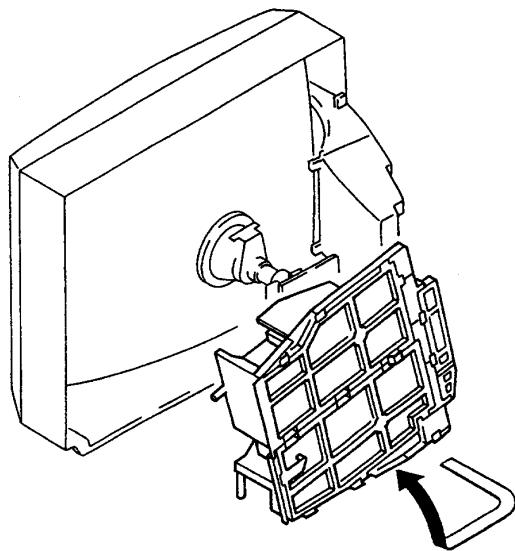
2-3. SPEAKER REMOVAL



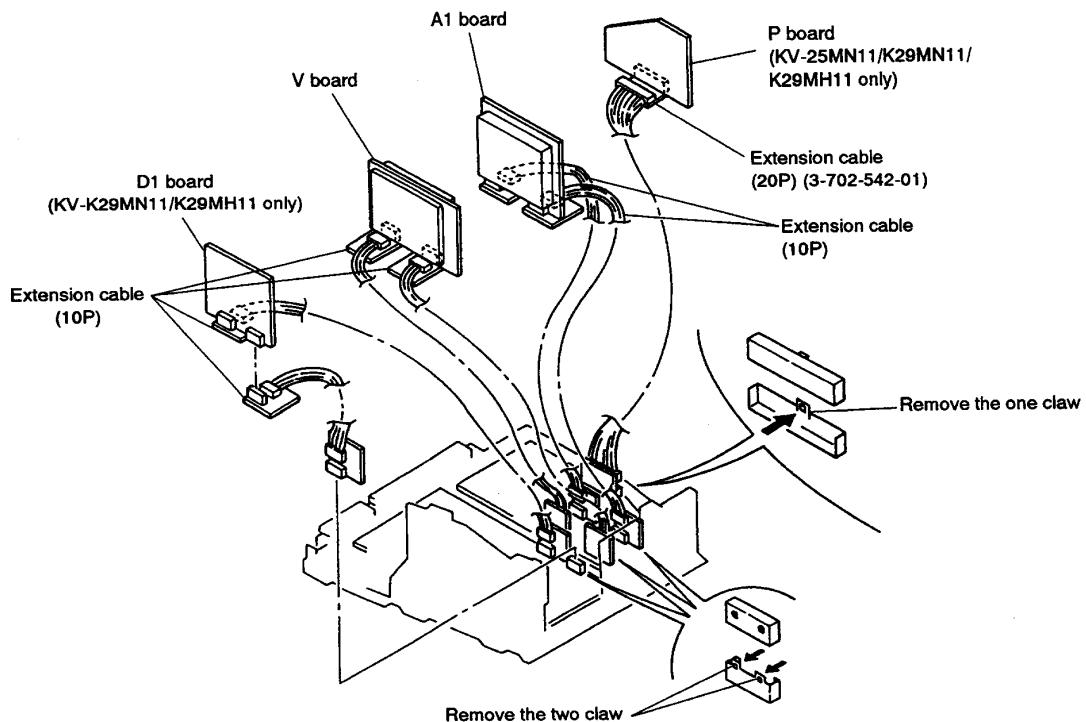
2-4. CHASSIS ASSY REMOVAL



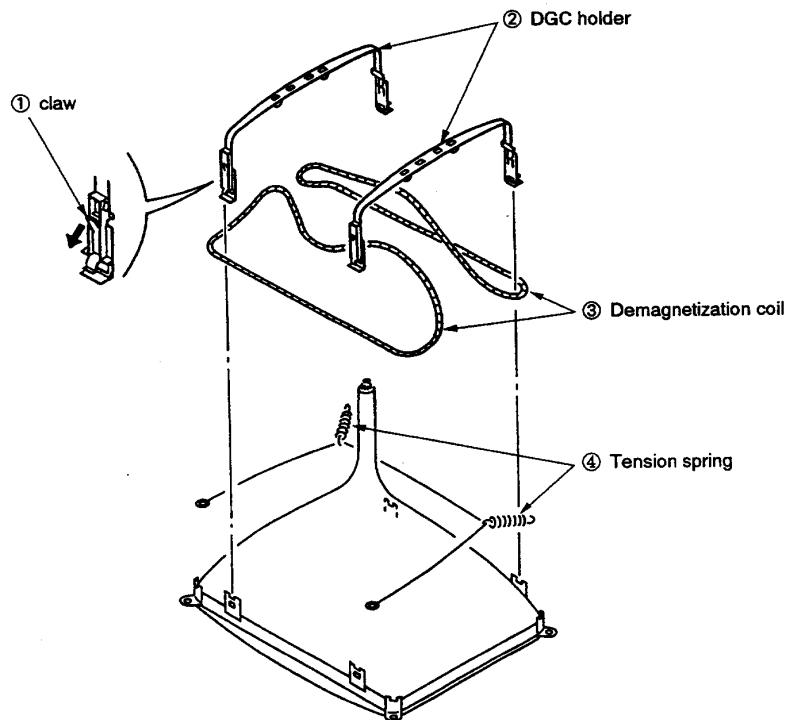
2-5. SERVICE POSITION



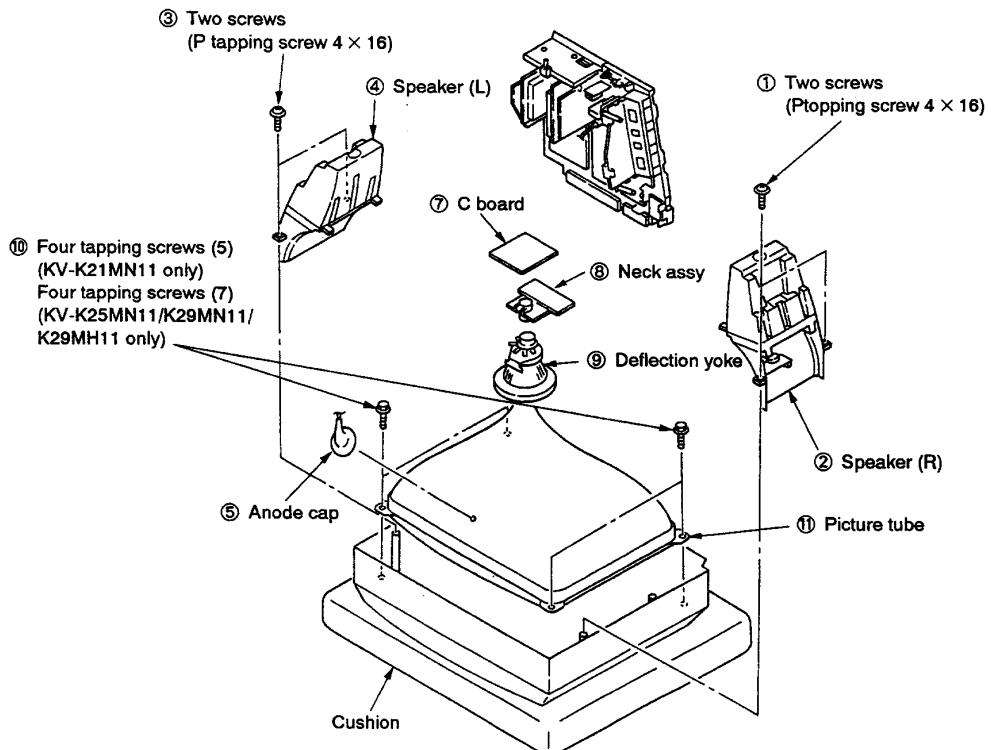
2-6. EXTENSION CABLE



2-7. DEMAGNETIZATION COIL REMOVAL



2-8. PICTURE TUBE REMOVAL



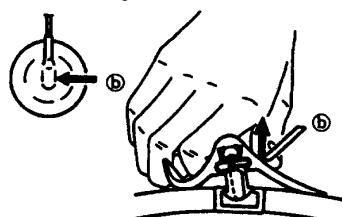
• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield, or carbon painted on the CRT, after removing the anode.

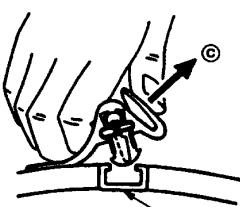
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ④.



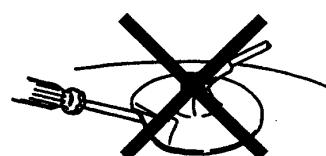
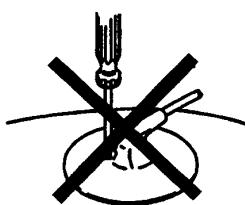
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⑤.



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑥.

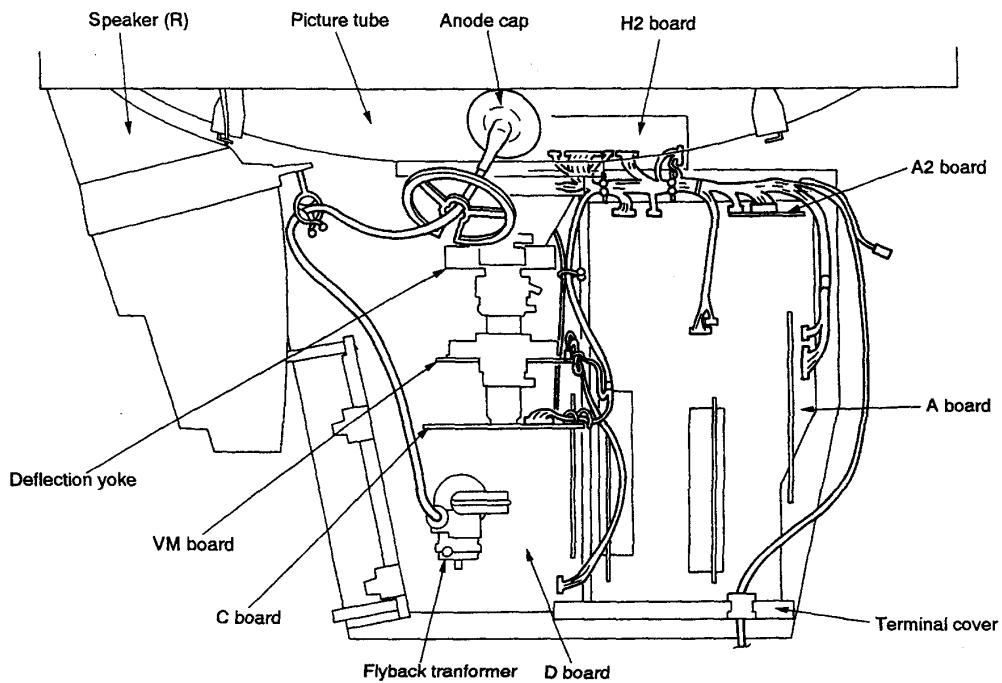
• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !
- A metal fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly ! The shatter-hook terminal will stick out or hurt the rubber.

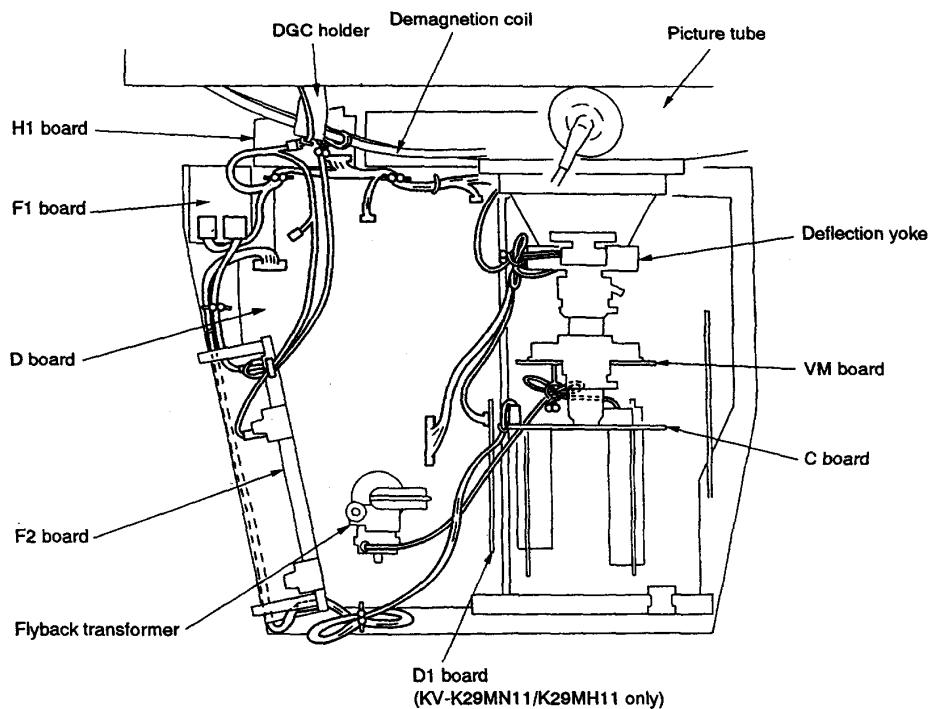


2-9. HARNESS LOCATION

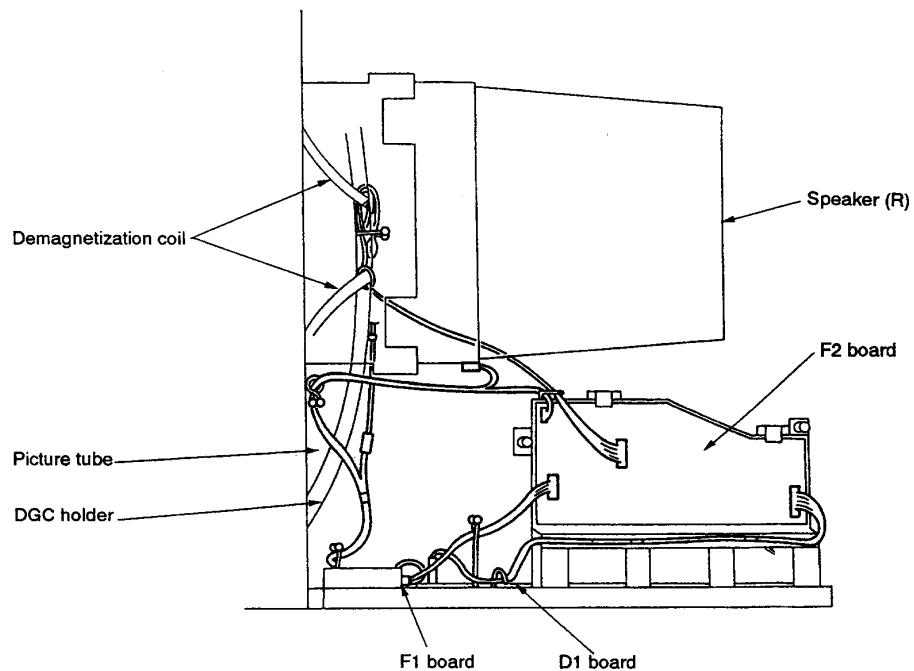
(1) TOP VIEW



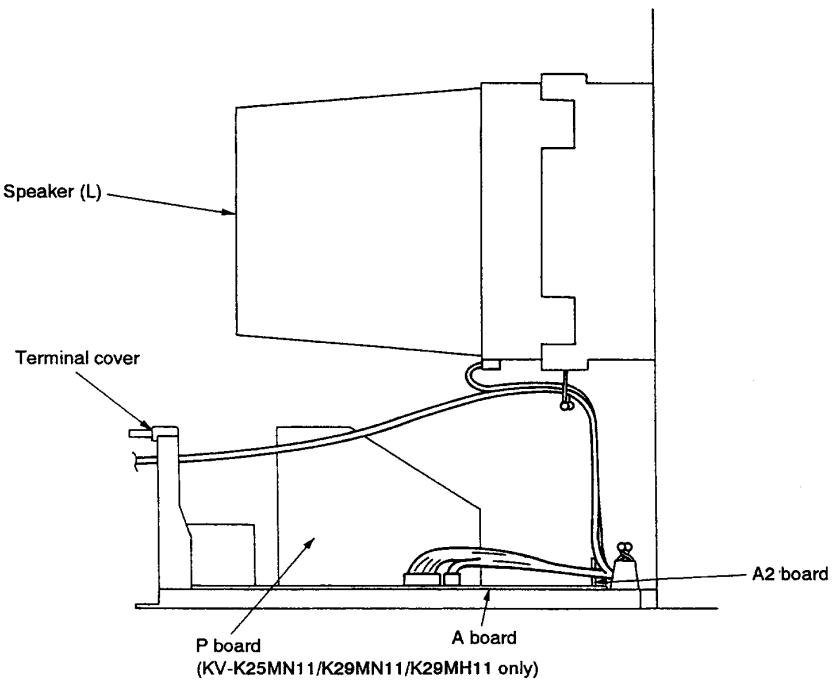
(2) TOP VIEW (LEFT)



(3) LEFT SIDE VIEW



(4) RIGHT SIDE VIEW



SECTION 3

SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted:

PICTURE control RESET
BRIGHTNESS control center

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
Contrast
Brightness } normal
2. Position neck ass'y as shown in Fig 3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.
(See Figures 3-1 through 3-3.)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Figure 3-1.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.
(See Figure 3-4.)

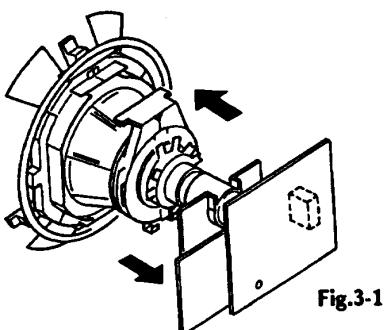


Fig.3-1

Perform the adjustments in order as follows :

1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.

1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

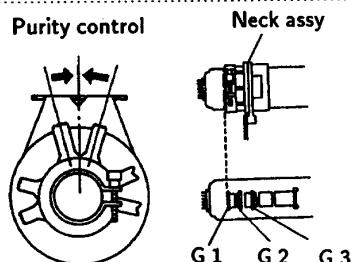


Fig.3-2

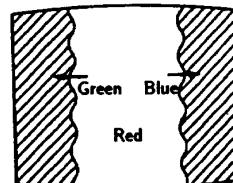


Fig. 3-3

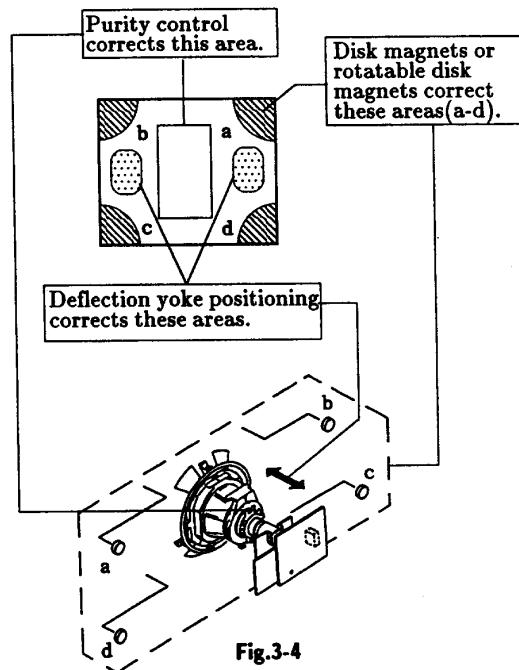


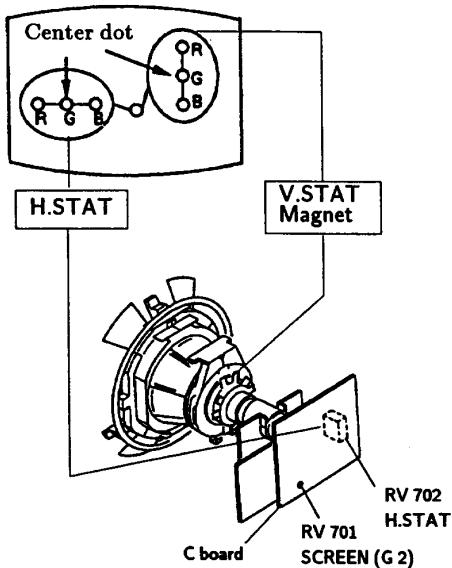
Fig.3-4

3-2. CONVERGENCE

Preparation :

- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and Vertical Static Convergence

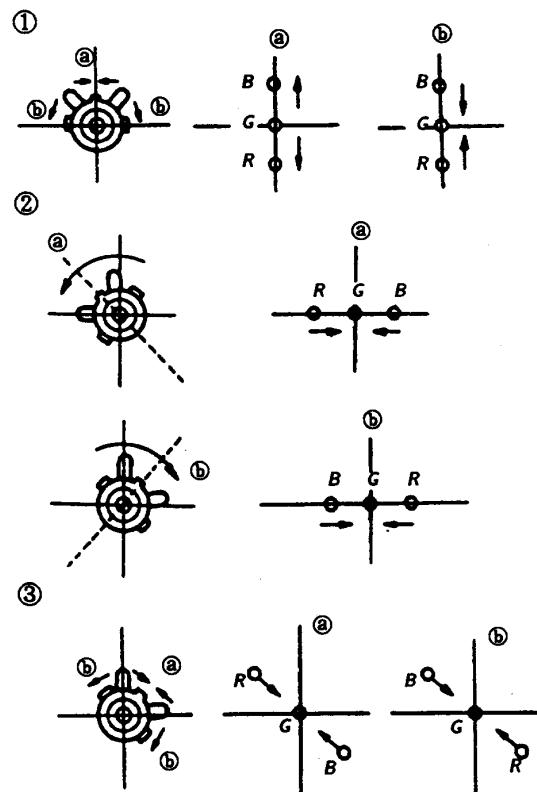


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
 (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

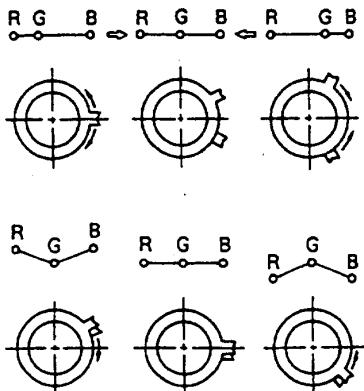
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the ② and ③ arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet

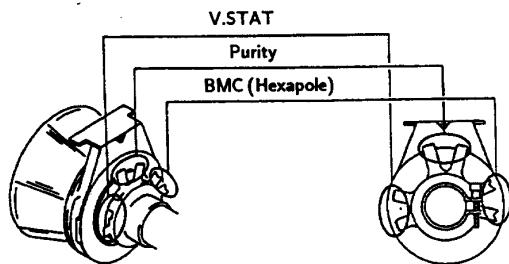


- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
 Use the HSTAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

(2) Dynamic Convergence Adjustment

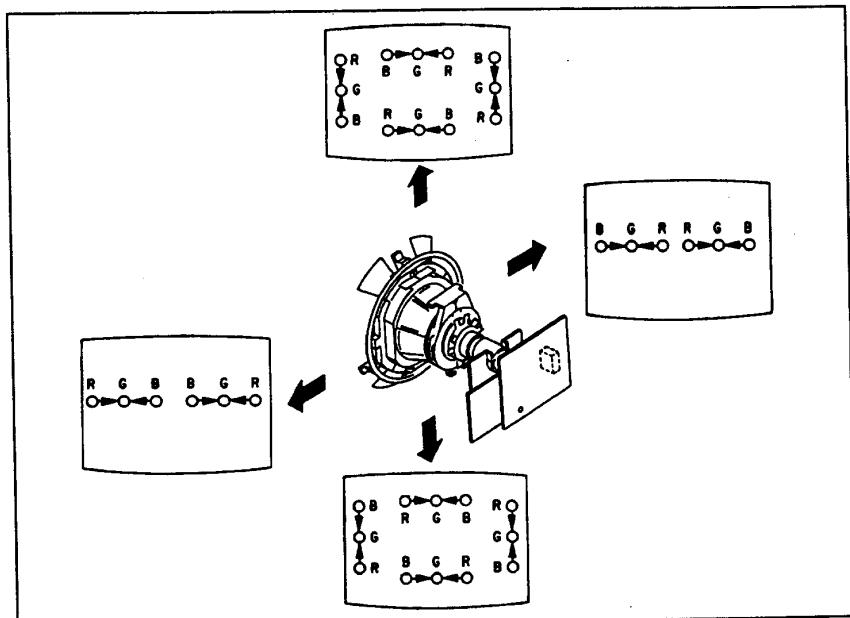
Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- 1. Slightly loosen the deflection yoke screws.
- 2. Remove the deflection yoke spacer.
- 3. Move the deflection yoke as shown in the figure below and optimize the convergence.
- 4. Tighten the deflection yoke screws.
- 5. Install the deflection yoke spacer.

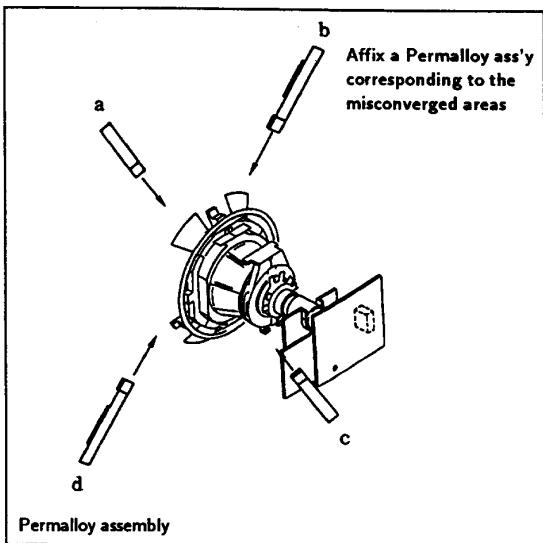
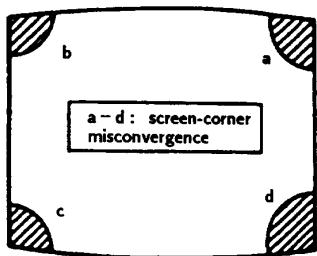


• Y separation axis correction magnet adjustment

1. Receive the cross-hatch signal, and adjust [PIX] to "MIN" and [BRT] to "standard".
2. Adjust the deflection yoke to the upright condition when it hits the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical at the top and bottom (open state).
4. Return the deflection yoke to its original position.

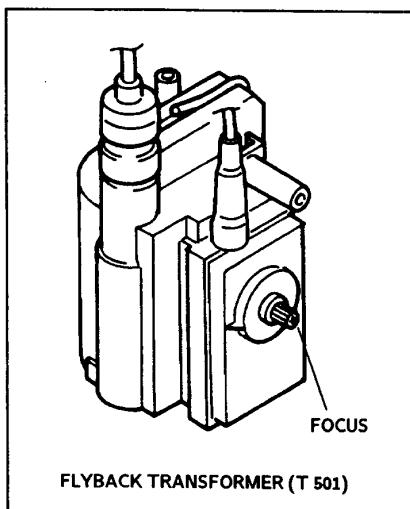


(3) Screen-corner Convergence



3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.



a. AN ITEM OF ADJUSTMENT

Item number	Adjustment item	Standard DATA				Note	
		50 Hz		60 Hz			
		Normal	Wide	Normal	Wide		
07	GDR	1F	1F	1F	1F	G Drive	
08	BDR	1F	1F	1F	1F	B Drive	
09	GCT	07	07	07	07	G CUT-OFF	
0A	BCT	07	07	07	07	B CUT-OFF	
05	SBR	1F	1F	1F	1F	SUB-BRIGHTNESS	

b. METHOD OF CANCELLATION FROM SERVICE MODE

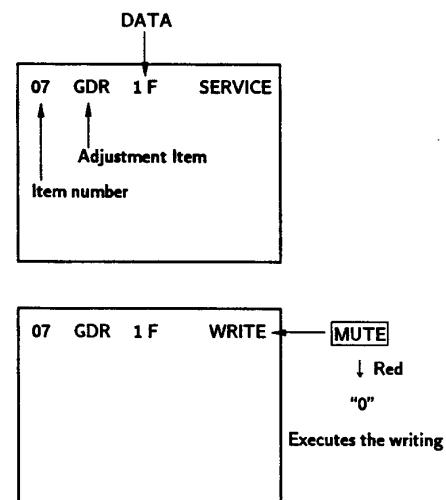
Set the standby condition (Press **POWER** button on the commander) in the next place, press **POWER** button again, hereupon it becomes TV mode.

c. METHOD OF WRITE FOR MEMORY

- 1) Set to Service Mode.
- 2) Press **1** (UP) and **4** (DOWN), select an item of adjustments.
- 3) Press **MUTE** button indicate WRITE (RED) on screen.
- 4) Press **0** button to write for memory.

d. MEMORY WRITE CONFIRMATION METHOD

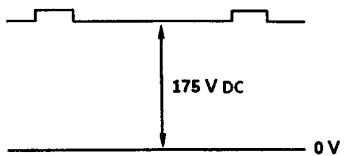
- 1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
- 2) Turn the power switch ON and set to Service Mode.
- 3) Call the adjusted items again, confirm they were adjusted.



3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G 2 (SCREEN) ADJUSTMENT(RV 701)

- 1) Set the PICTURE and BRIGHTNESS to normal.
- 2) Put to VIDEO input mode without signals.
- 3) Set to Service Mode.
- 4) Change BLU data of the item number “57” from “01” to “00”. (To turn off Blue Black.)
- 5) Press **MUTE**, and **0** to write the data in the memory.
- 6) Connect R, G, and B of the C board cathode to the oscilloscope.
- 7) Adjust G2 (RV701) volume to the value below.



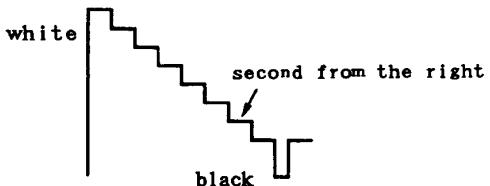
- 8) Re-set BLU data of the item number "57" from "00" back to "01".
- 9) Press **MUTE**, and **0** to write the data in the memory.

2. WHITE BALANCE ADJUSTMENTS

- 1) Set to service mode.
- 2) Input an entire white signal.
- 3) Set the PICTURE to minimum.
- 4) Select SBR with **[1]** and **[4]**, and then set the level to minimum with **[3]** and **[6]**.
- 5) Select GCT and BCT with **[1]** and **[4]**.
And adjust the level with **[3]** and **[6]** for the best white balance.
- 6) Set the PICTURE to maximum.
- 7) Select GDR and BDR with **[1]** and **[4]**, and adjust the level with **[3]** and **[6]** for the best white balance.
- 8) Write into the memory by pressing **MUTE** → then **[0]**.

3. SUB BRIGHT ADJUSTMENT

- 1) Set to service mode.
- 2) Input a staircase signal of black and white from the pattern generator.
- 3) BRIGHTNESS ... RESET
PICTURE minimum
- 4) Select SBR with **1** and **4**, and adjust SBR level with **3** and **6** so that the stripe second from the right is dimly lit.



SECTION 4

CIRCUIT ADJUSTMENTS

4-1. ADJUSTMENTS WITH COMMANDER

Service adjustments are made with the RM-845 that comes with this unit.

Entering service mode

With the unit on standby

↓

“DISPLAY”

↓

“5”

↓

“VOL (+)”

↓

“POWER”

This operation sequence puts the unit into service mode.

“1”, “4”	Raise/lower the service item number
“3”, “6”	Raise/lower the data
“MUTE”	Writes
“0”	Executes the writing

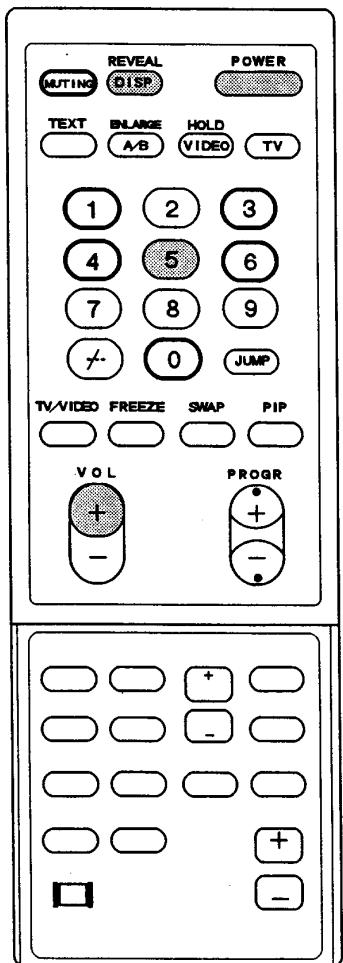
“7”, “0” The data all becomes the values in memory

“8”, “0” User control all goes to the standard state

“9” H-FRE automatic adjustment

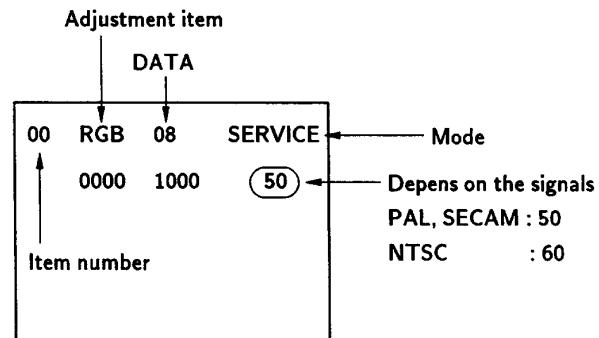
“5”, “0” Service data initialization (Besure not to use usually.)

“2”, “0” Write 50Hz adjustment data to 60Hz, or in opposition.



RM-845 P

The screen display is :



“1”, “4” Select the adjustment item.

↓

“3”, “6” Raise/lower the data.

↓

“MUTE” Writes

↓

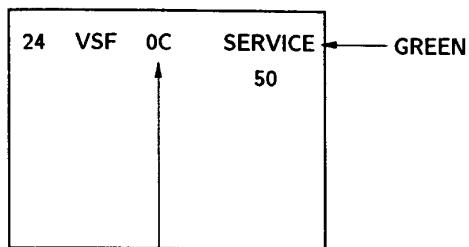
“0” Executes the writing.

4-2. ADJUSTMENT METHOD

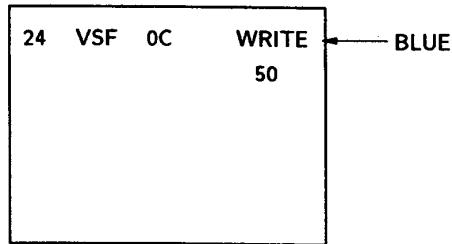
Item Number 24

This explanation uses V-SHFT as an example.

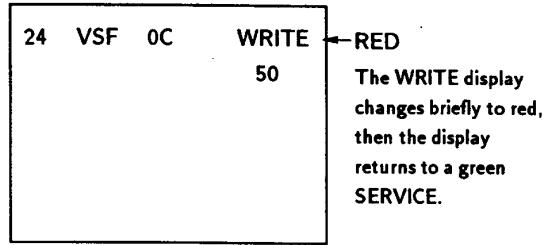
1. Select 24 V-SHFT with the "1" and "4" buttons.
2. Raise/lower the data with the "3" and "6" buttons.
3. Select the optimum state. (The standard is for OF PAL reception.)
4. Write with the MUTE button. (The display changes to blue WRITE.)
5. Execute the writing with the "0" button. (The WRITE display changes briefly to red.)



Adjusted with "3" and "6" buttons



Written with "MUTE"



Write excuted with "0"

Use the same method for Items Number 00-5E. Use "1" and "4" to select the adjustment item, use "3" and "6" to adjust, write with "MUTE", then execute the write with "0".

Note : In "WRITE", the data of all items are wrote together to memory.

- H-FRE can be adjusted automatically. Feed a standard signal and input "9", the automatic adjustment is executed.
- As for V-FREQ, by searching the bolded screen V range with adjusting data.

Note : In item 02 50Hz, or item 03 60Hz, it operates normally in spite of the 50Hz or the 60Hz of the input signal. Therefore be sure to adjust data according to the input signal.

Item number	Adjustment Item	Data range	Standard DATA				Note	(Device)		
			50 Hz		60 Hz					
			Normal	Wide	Normal	Wide				
00	RGB	00~0F	07	07	07	07	RGB PICTURE	(CXA 1587 S)		
01	SCN	00~0F	08	06	08	06	SUB-Contrast	(CXA 1587 S)		
02	VM	00~03	02	02	02	02	VM Level	(CXA 1587 S)		
03	SCL	00~0F	08	07	08	07	SUB-COLOR	(CXA 1587 S)		
04	SHU	00~0F	08	08	08	08	SUB-HUE	(CXA 1587 S)		
05	SBR	00~3F	1F	1F	1F	1F	SUB-BRIGHTNESS	(CXA 1587 S)		
06	ABL	00~03	03	03	02	02	ABL Mode	(CXA 1587 S)		
07	GDR	00~3F	1F	1F	1F	1F	G Drive	(CXA 1587 S)		
08	BDR	00~3F	1F	1F	1F	1F	B Drive	(CXA 1587 S)		
09	GCT	00~0F	07	07	07	07	G CUT-OFF	(CXA 1587 S)		
0A	BCT	00~0F	07	07	07	07	B CUT-OFF	(CXA 1587 S)		
0B	AKR	00~FF	7F	7F	7F	7F	AKB OFF R CUT-OFF	(CXA 1587 S)		
0C	AKG	00~FF	7F	7F	7F	7F	AKB OFF G CUT-OFF	(CXA 1587 S)		
0D	AKB	00~FF	7F	7F	7F	7F	AKB OFF B CUT-OFF	(CXA 1587 S)		
0E	GMA	00~0F	0C	0C	0C	0C	γ control	(CXA 1587 S)		
0F	DCT	00~03	00	00	00	00	DC TRAN	(CXA 1587 S)		
10	DPI	00~03	03	03	03	03	D-PIC	(CXA 1587 S)		
11	YFI	00~3F	22	22	22	22	Y Filter Adjust	(CXA 1587 S)		
12	SHL	00~01	01	01	01	01	SHP-LIM	(CXA 1587 S)		
13	YDL	00~0F	07	07	07	07	Y Delay Time	(CXA 1587 S)		
14	YSW	00~03	01	01	01	01	Y-SW OUT	(CXA 1587 S)		
15	HSH	00~3F	24	24	28	28	H Shift	(CXA 1587 S)		
16	POV	00~0F	08	08	08	08	Pre-Over	(CXA 1587 S)		
17	SHF	00~03	02	02	02	02	SHP-F 0	(CXA 1587 S)		
18	SSH	00~03	01	01	02	02	SUB-Sharpness	(CXA 1587 S)		
19	RMT	00~01	00	00	00	00	R-Mute	(CXA 1587 S)		
1A	GMT	00~01	00	00	00	00	G-Mute	(CXA 1587 S)		
1B	BMT	00~01	00	00	00	00	B-Mute	(CXA 1587 S)		
1C	AG 1	00~01	00	00	00	00	Aging 1 (White)	(CXA 1587 S)		
1D	AKF	00~01	00	00	00	00	AKB-OFF	(CXA 1587 S)		
1E	SMD	00~01	00	00	00	00	Scan Mode	(CXA 1587 S)		
1F	VEX	00~01	00	00	00	00	V-Extension	(CXA 1587 S)		
20	AFC	00~03	03	03	03	03	AFC Loop Gain	(CXA 1587 S)		
21	AFF	00~01	00	00	00	00	AFC-OFF	(CXA 1587 S)		
22	RFP	00~01	00	00	00	00	Reference Position	(CXA 1587 S)		
23	VSZ	00~3F	1E	1E	1A	1A	V-Size	(CXD 2018 Q)		
24	VSF	00~3F	2E	2E	32	32	V-Shift	(CXD 2018 Q)		
25	SCR	00~F	08	08	08	08	S-Correction	(CXD 2018 Q)		
26	VLN	00~F	08	08	08	08	V-Linearity	(CXD 2018 Q)		
27	HSZ	00~3F	0C	0C	0 E	0 E	H-Size	(CXD 2018 Q)		
28	PAP	00~3F	2E	2E	2E	2E	Pin-Amp	(CXD 2018 Q)		
29	TLT	00~0F	09	09	09	09	Tilt	(CXD 2018 Q)		
2A	UCP	00~0F	0A	0A	0A	0A	Upper Corner Pin	(CXD 2018 Q)		
2B	LCP	00~0F	0C	0C	0C	0C	Lower Corner Pin	(CXD 2018 Q)		
2C	VBW	00~0F	08	08	08	08	V-Bow	(CXD 2018 Q)		
2D	VAG	00~0F	08	08	08	08	V-Angle	(CXD 2018 Q)		
2E	HVV	00~07	04	04	04	04	HV-Comp-V	(CXD 2018 Q)		
2F	HVH	00~07	00	00	00	00	HV-Comp-H	(CXD 2018 Q)		
30	FCL	00~07	03	03	03	03	Frame Color	(SDA 9188)		
31	FON	00~01	01	01	01	01	Frame ON	(SDA 9188)		
32	DLY	00~07	00	00	00	00	Select Delay LL 3 P	(SDA 9188)		
33	P-V	00~0F	07	07	07	07	V read delay	(SDA 9188)		
34	PVS	00~07	04	04	04	04	PIP-V offset	(SDA 9188)		
35	P-H	00~3F	0A	0A	07	07	H read delay	(SDA 9188)		
36	PHS	00~0F	07	07	03	03	PIP-H offset	(SDA 9188)		
37	CTR	00~0 F	0A	0A	0A	0A	Contrast	(SDA 9188)		
38	FWV	00~01	01	01	01	01	Frame Width V	(SDA 9188)		
39	FWH	00~01	01	01	01	01	Frame Width H	(SDA 9188)		
3A	DVI	00~0F	07	07	07	07	Setting Delay VSI	(SDA 9188)		
3B	DVP	00~0 F	0F	0F	0F	0F	Delay VSP Pulse	(SDA 9188)		
3C	BRT	00~0 F	0C	0C	0C	0C	Frame BRIGHT Data	(SDA 9188)		

Item number	Adjustment item	Data range	Standard DATA				Note	(Device)		
			50 Hz		60 Hz					
			Normal	Wide	Normal	Wide				
3D	LEV	00~0 F	00	00	00	00	Level Adjust	(TDA 9840)		
3E	STR	00~3 F	02	02	02	02	Stereo Adjust	(TDA 9840)		
3F	AXG	00~01	00	00	00	00	AUX Output Gain	(TDA 8204)		
40	AXM	00~01	00	00	00	00	AUX Output Mute	(TDA 8204)		
41	VCX	00~01	00	00	00	00	VCXO free run	(TDA 8204)		
42	ERC	00~01	00	00	00	00	Error count Time	(TDA 8204)		
43	MXE	00~01	00	00	00	00	MAX. allowed Error	(TDA 8204)		
44	SRO	00~01	00	00	00	00	SRO set Bit	(TDA 8204)		
45	ATO	00~00	01	01	01	01	Auto Selection	(TDA 8204)		
46	SYS	00~01	00	00	00	00	System select	(TDA 8204)		
47	FSW	00~03	00	00	00	00	Force Switch	(TDA 8204)		
48	SYN	00~01	01	01	01	01	Synthesizer	(TDA 8204)		
49	VCR	00~01	00	00	00	00	VCC Reference Sw Separation Level	(CXP 1315 P)		
4A	SEL	00~FF	5F	5F	5 F	5F				
4B	DCS	00~3F								
4C	UYB	00~3F								
4D	LYB	00~3F								
4E	HAP	00~3F								
4F	HTL	00~3F								
50	UCB	00~3F								
51	UTL	00~3F								
52	LCB	00~3F								
53	LTL	00~3F								
54	TXP	00~0 F	00	00	00	00	Teletext Picture	(Teletext μ -Con)		
55	ODL	00~FF	10	10	10	10	Power ON Delay	(CXP 80424)		
56	OSH	00~3 F	0F	0F	0F	0F	OSD Position H	(CXP 80424)		
57	BLU	00~01	01	01	01	01	Blue Back Feature	(CXP 80424)		
58	ROC	00~0F	07	07	07	07	Center of Rotation	(CXP 80424)		
59	ROS	00~07	03	03	03	03	Step Width	(CXP 80424)		
5A	HTR	00~3 F	1 F	1 F	1 F	1 F	H Trapezoid	(CXP 80424)		
5B	MUT	00~01	01	01	01	01	No Sync. Mute	(CXP 80424)		
5C	DID	00~01	00	00	00	00	Disable Degauss	(CXP 80424)		
5D	OP0	00~FF	*1	*1	*1	*1	Option 0	(CXP 80424)		
5E	OP1	00~0F	*2	*2	*2	*2	Option 1	(CXP 80424)		

*1 Input data are different according to models.

Item	CCD	Text	PinP	Jpn	NICM	W. G	MTS	Comb
KV-K21MN11	0	1	0	0	1	1	0	1
KV-K25MN11	0	1	1	0	1	1	0	1
KV-K29MN11	0	1	1	0	1	1	0	1
KV-K29MH11	0	1	1	0	1	1	0	1

*2 Input data are different according to models.

Item	—	—	—	—	Mono	Tilt	Dcon	Chin
KV-K21MN11	0	0	0	0	0	0	0	1
KV-K25MN11	0	0	0	0	0	0	0	1
KV-K29MN11	0	0	0	0	0	1	0	1
KV-K29MH11	0	0	0	0	0	1	0	1

PICTURE QUALITY ADJUSTMENTS

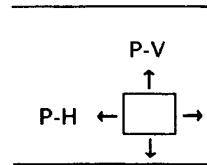
Numbers 03-05, 18

{CL
 {HU
 {BR
 {SH } Set to the standard values.

DISPLAY POSITION ADJUSTMENT

Numbers 35-36

- V Pin-P vertical position correction
- VS Pin-P vertical offset
- H Pin-P horizontal position correction
- HS horizontal offset



When pressing PIP "POSITION" key in the service mode, "POSITION" turns round and stand automatically.

Numbers 33-36 are set to the standard values.

- XP Teletext picture
- corrects the brightness for when teletext is received.
- standard value is 05.

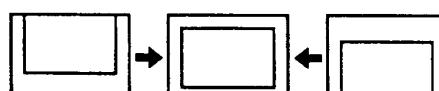
4-5. PICTURE DISTORTION ADJUSTMENT

Item Numbers 23-2D

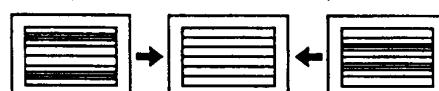
23 VSZ (V SIZE)



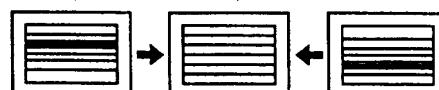
24 VSF (V SHIFT)



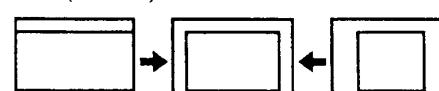
25 SCR (VERTICAL S correction)



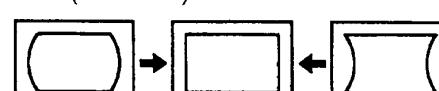
26 VLN (V LINEARITY)



27 HSZ (H SIZE)



28 PAP (PIN AMP)

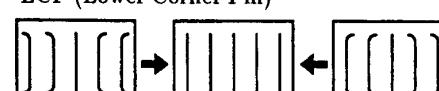


29 TLT (TILT)

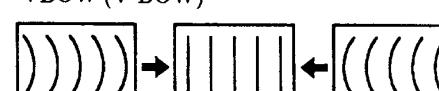


2A UCP (Upper Corner Pin)

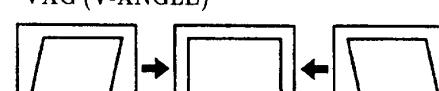
2B LCP (Lower Corner Pin)



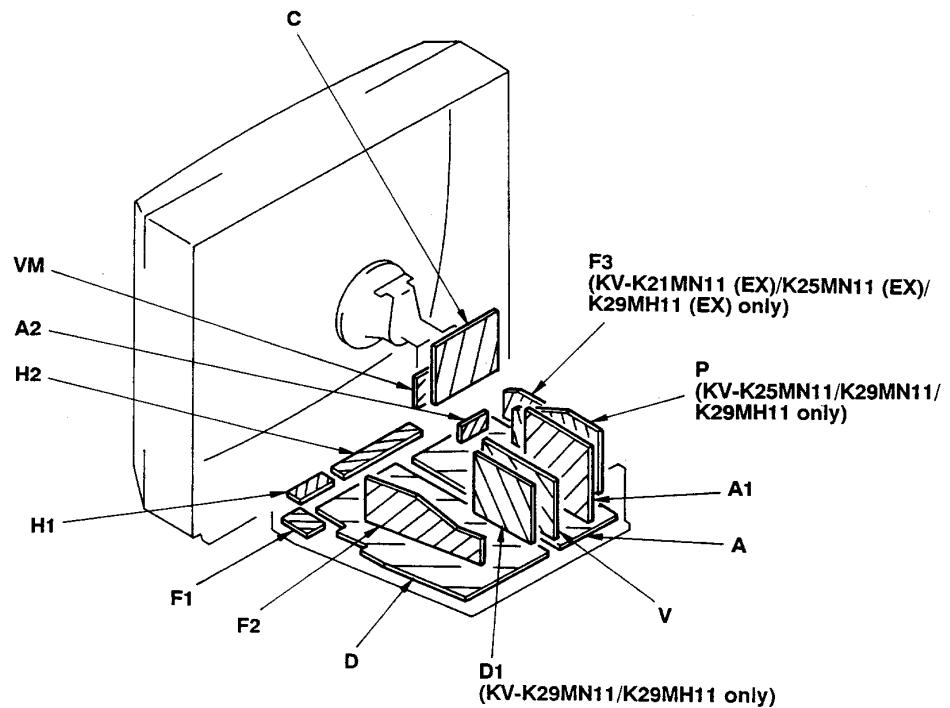
2C VBOW (V-BOW)



2D VAG (V-ANGLE)

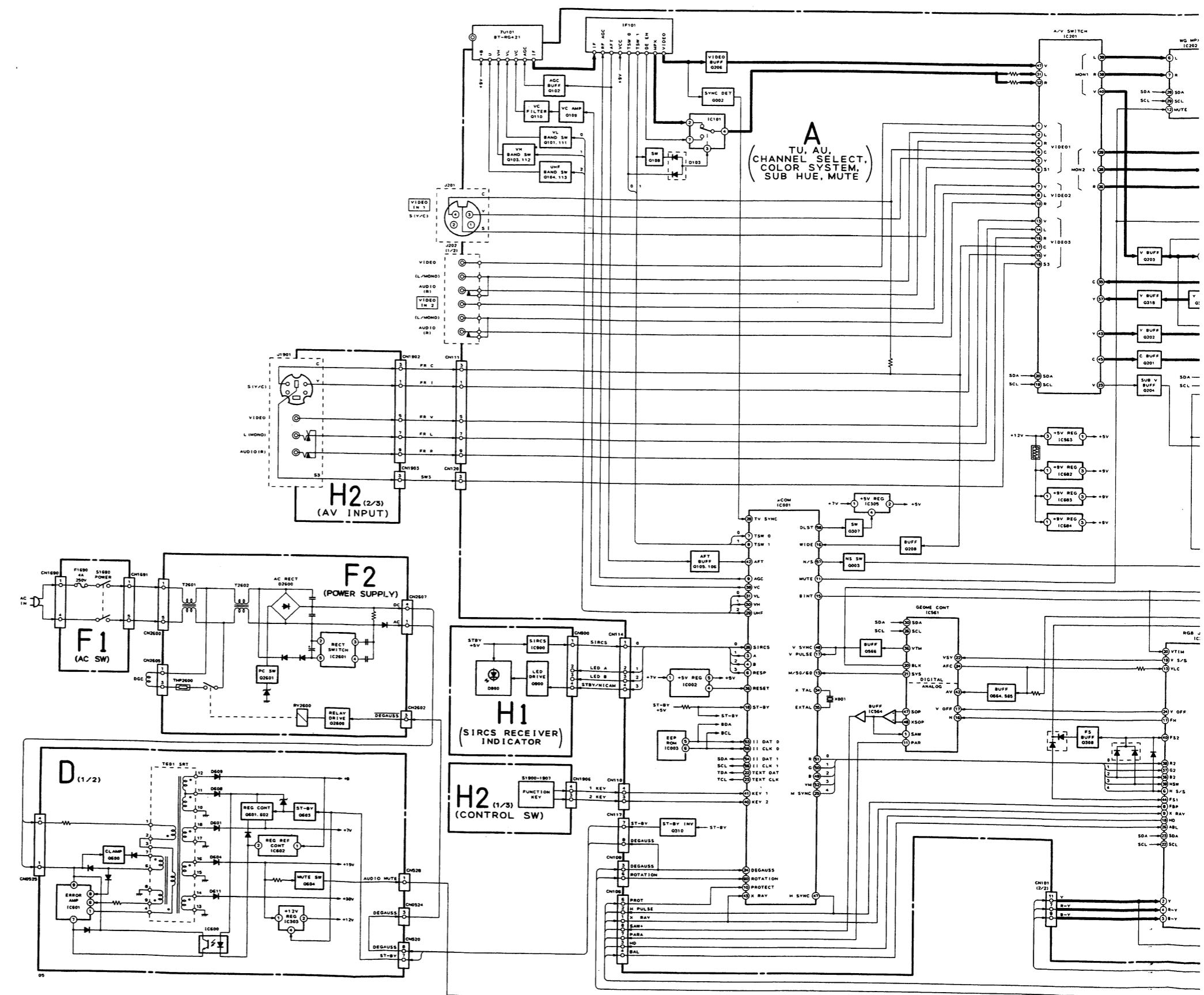


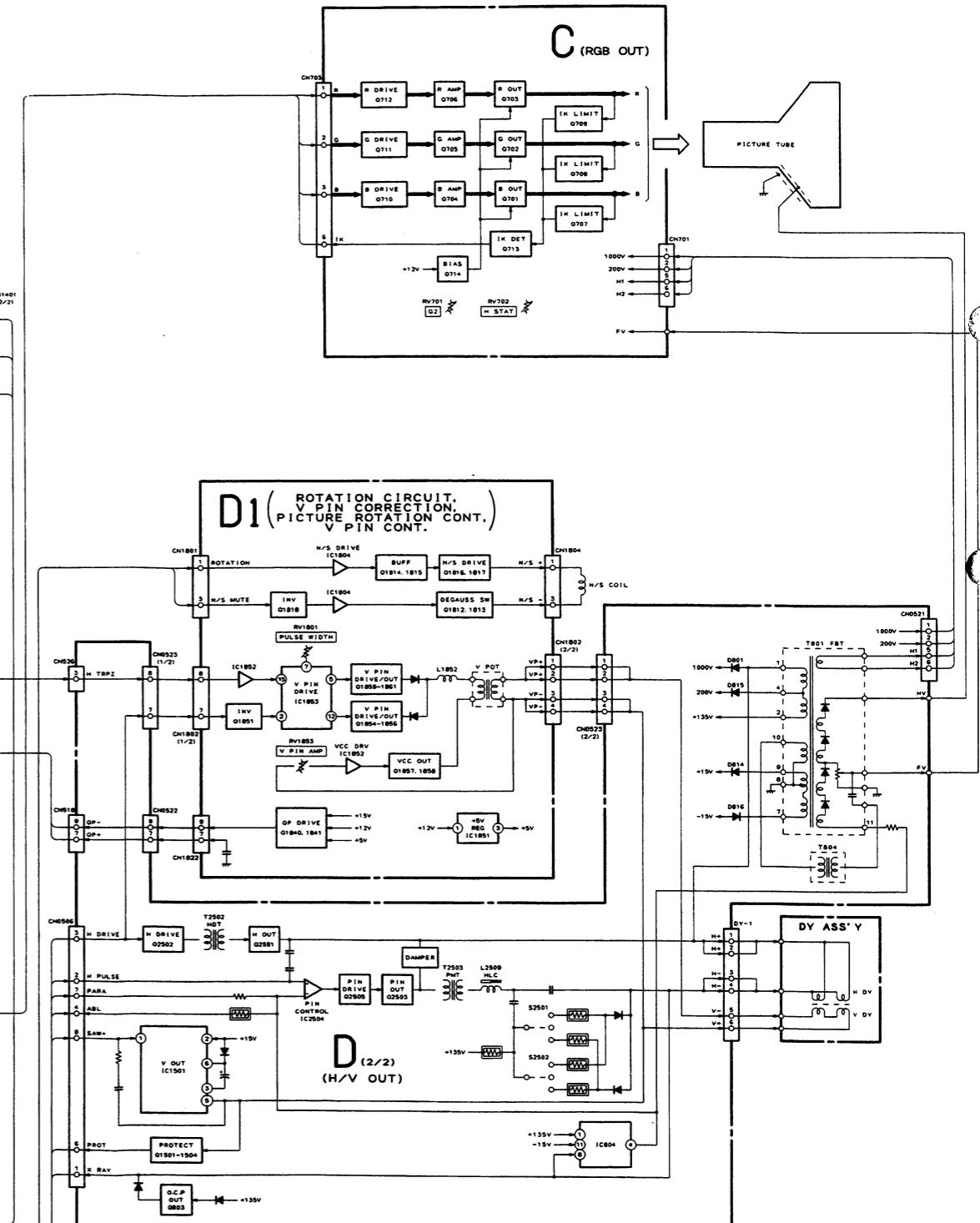
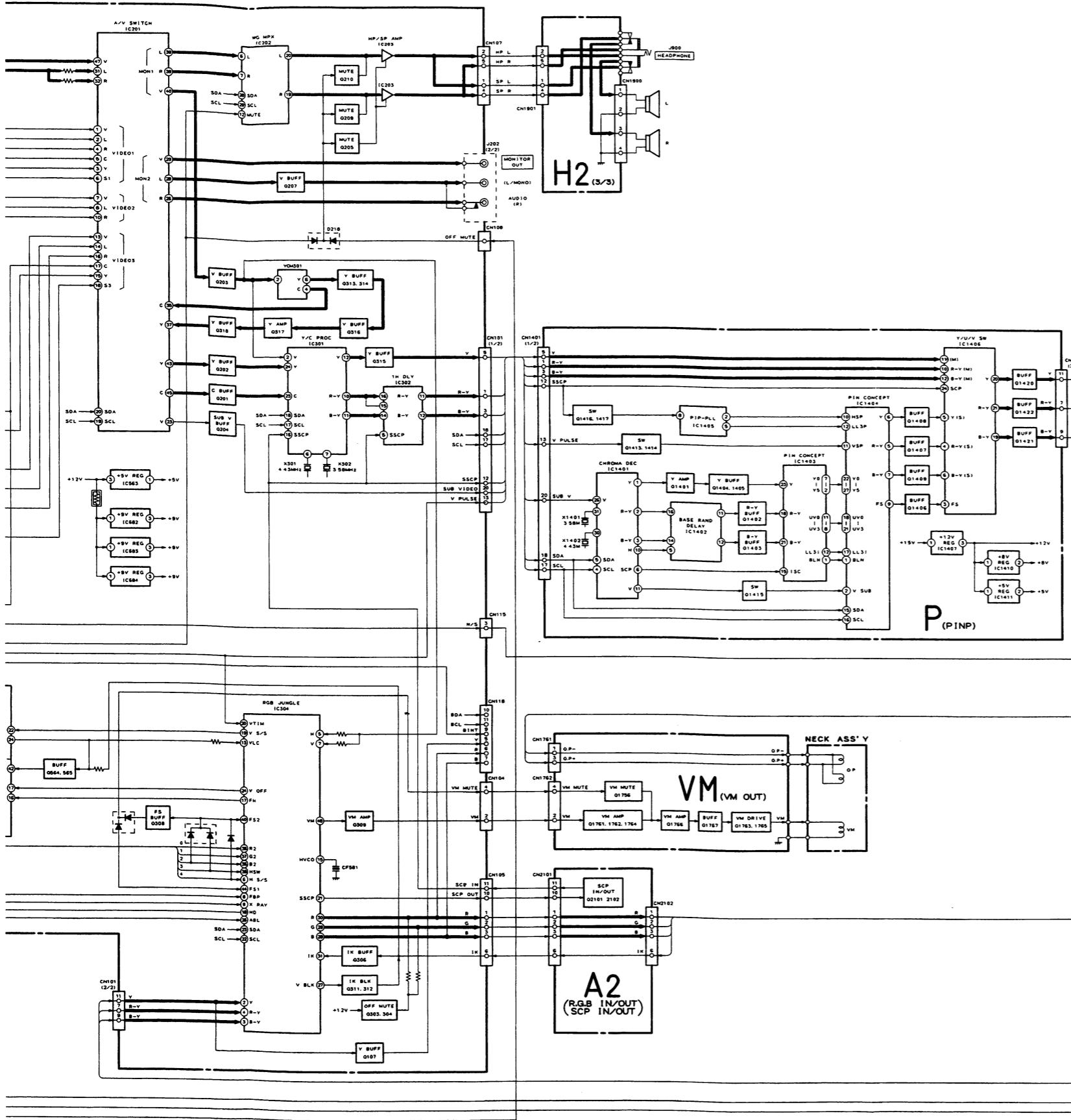
CIRCUIT BOARDS LOCATION



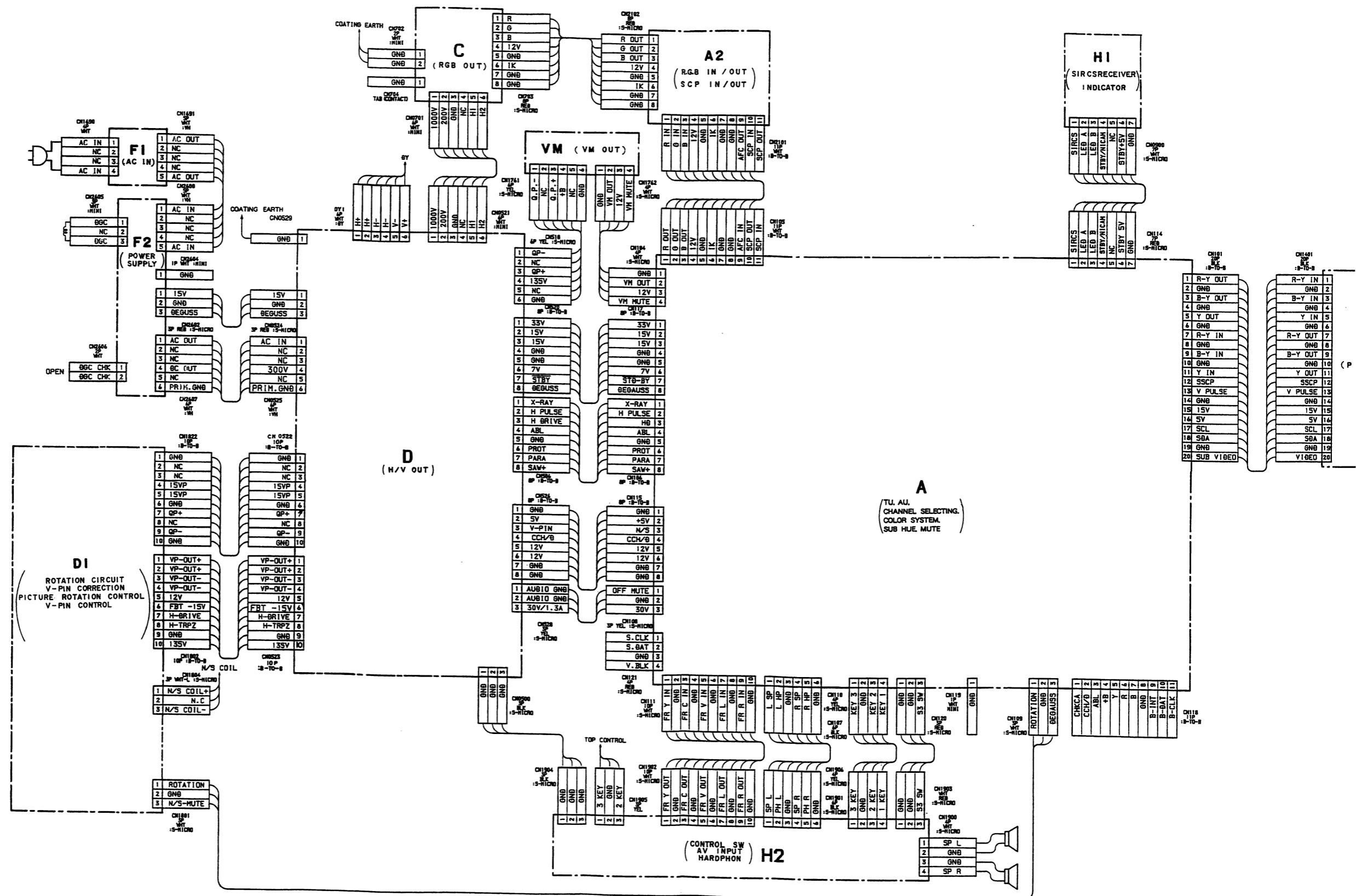
SECTION 6 DIAGRAMS

6-1. BLOCK DIAGRAM

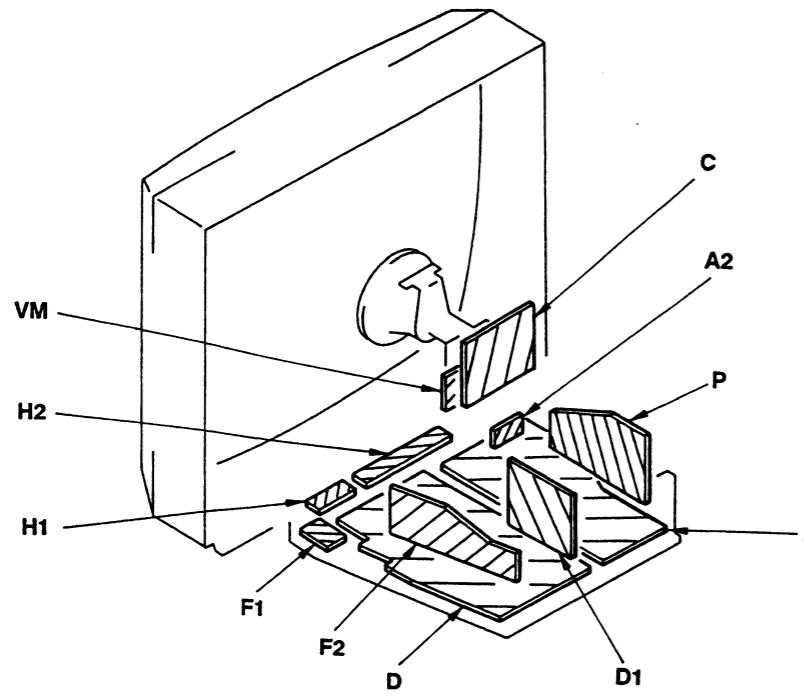




6-2. FRAME SCHEMATIC DIAGRAM



CIRCUIT BOARDS LOCATION



6-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μ F unless otherwise noted. pF: $\mu\mu$ F 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms. $k\Omega = 1000\Omega$, $M\Omega = 1000K\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power $1/4$ W (CHIP: 1/10W)

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input.
 - no mark: PAL
 - < >: SECAM
 - (): NTSC 3.58
 - { }: NTSC 4.43
- Readings are taken with a 10 $M\Omega$ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- * : Can not be measured.
- Circled numbers are waveform reference.
- : B + bus.
- : B - bus.
- : signal path.

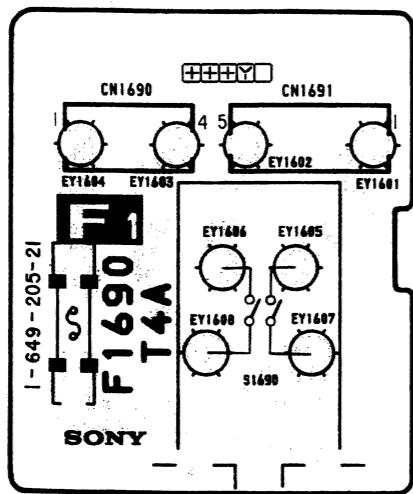
Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Reference information

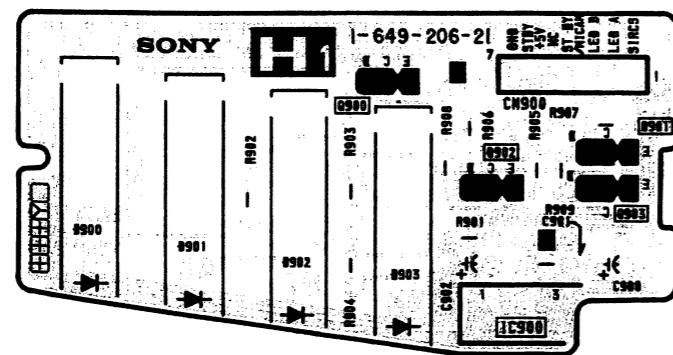
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: *	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

PRINTED WIRING BOARDS

– F1 Board –



– H1 Board –



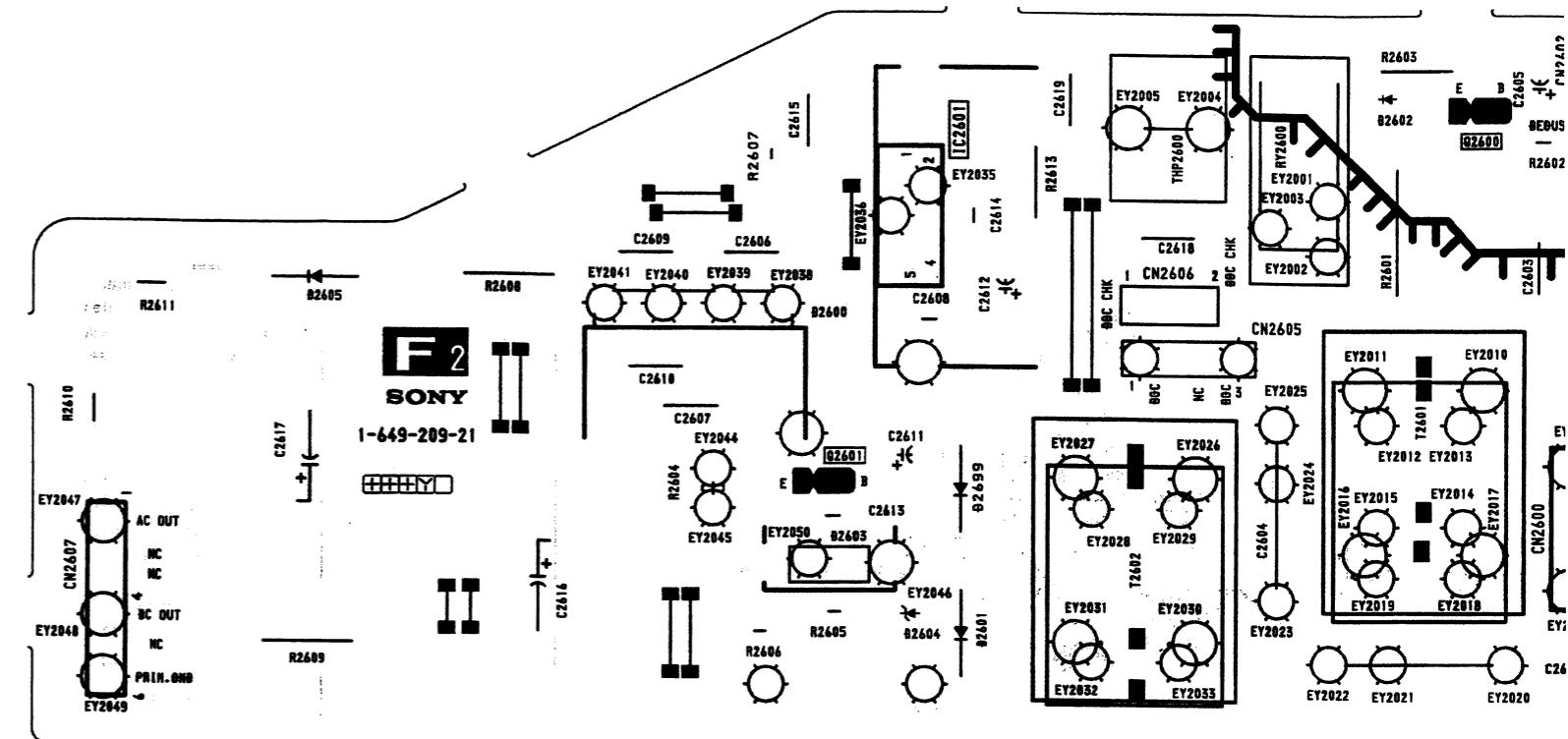
F1 [AC IN]

H1 [SIRCS RECEIVER,
INDICATOR]

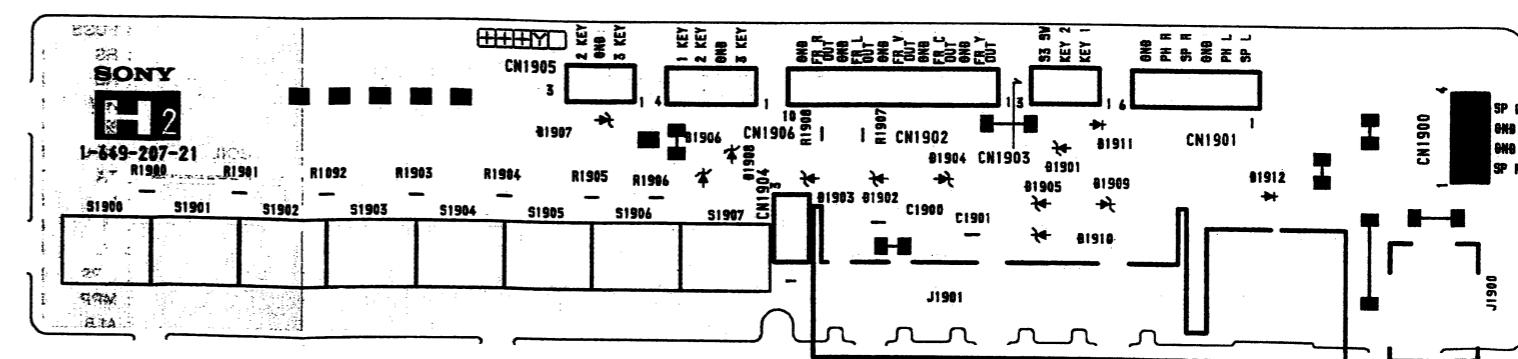
F2 [POWER SUPPLY]

H2 [CONTROL SW,
AV INPUT,
HEADPHONE]

– F2 Board –



- H2 Board -



NOTE:
The cir
600 Vp
inspecti

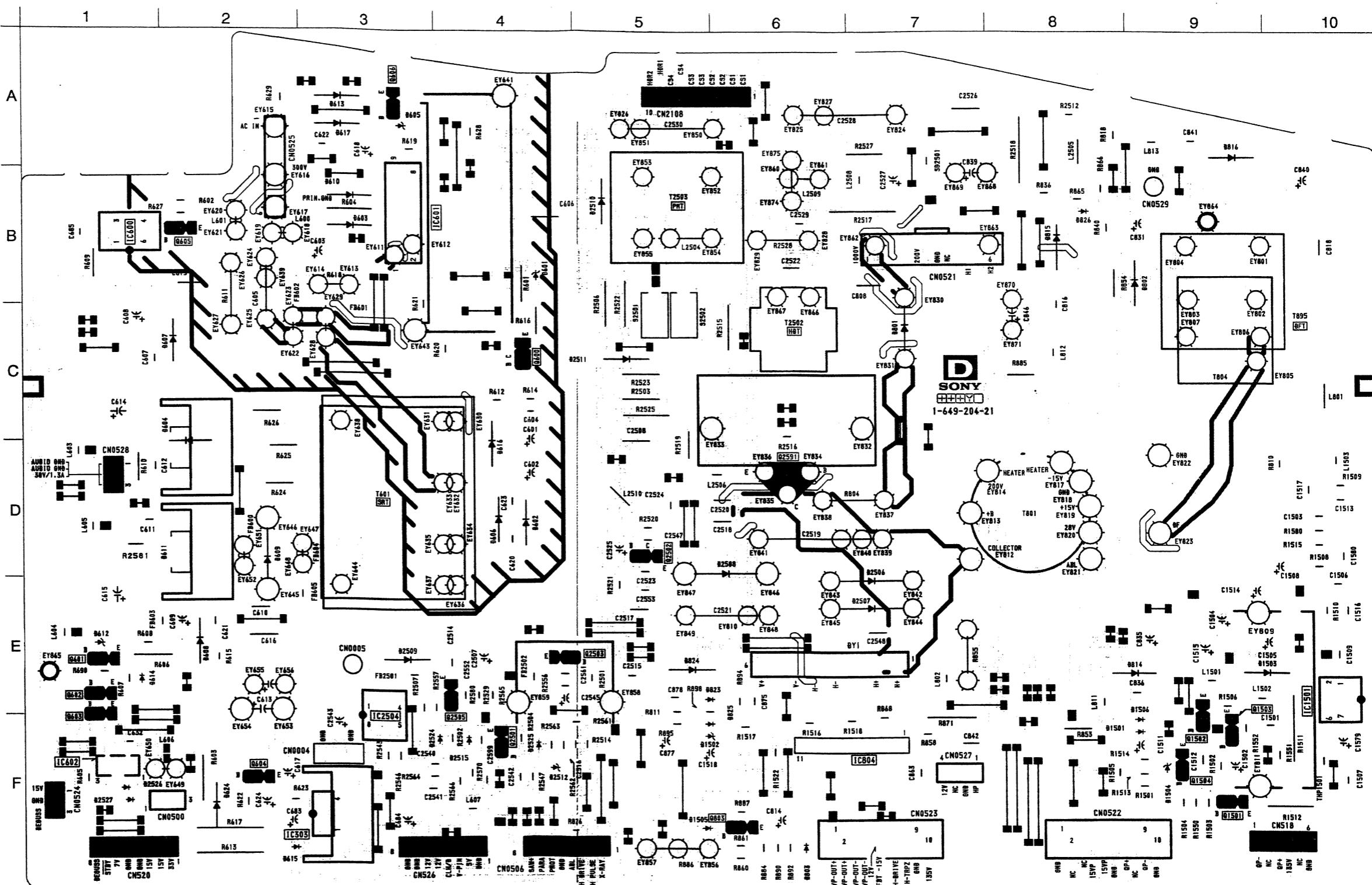
D

[H/V OUT]

- D Board -

• D BOARD

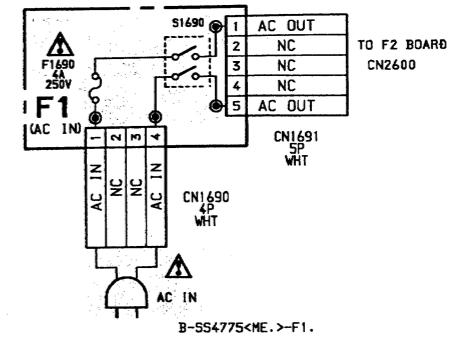
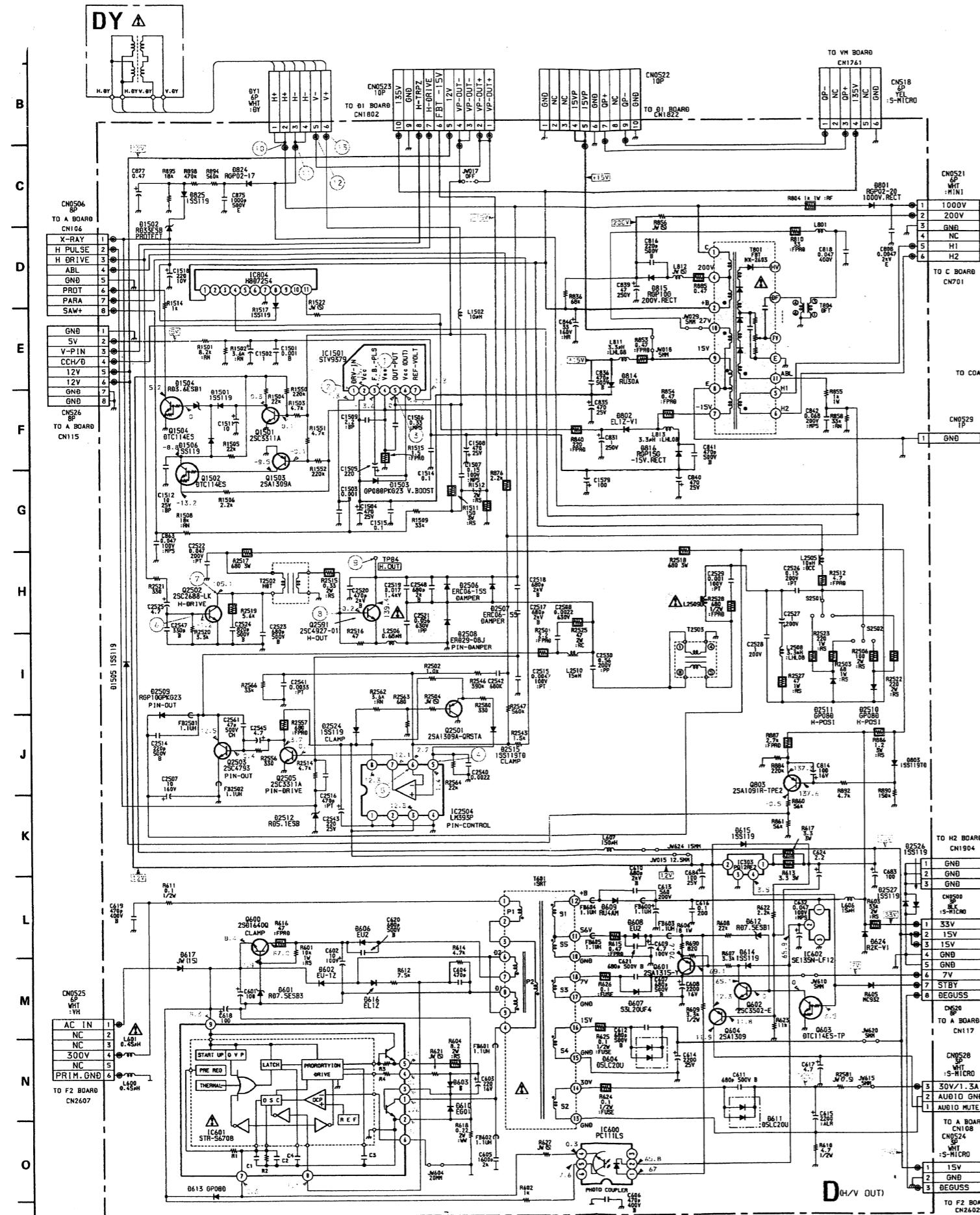
IC	DIODE
IC303	F - 3
IC600	B - 1
IC601	B - 3
IC602	F - 1
IC804	F - 7
IC1501	E - 10
IC2504	E - 3
TRANSISTOR	
Q600	C - 4
Q601	E - 1
Q602	E - 1
Q603	E - 1
Q604	F - 3
Q803	F - 6
Q1501	F - 9
Q1502	E - 9
Q1503	E - 9
Q1504	F - 9
Q2501	F - 4
Q2502	D - 5
Q2503	E - 4
Q2505	E - 4
Q2591	D - 6
D601	B - 4
D602	D - 4
D604	C - 2
D606	D - 4
D607	C - 2
D608	E - 2
D609	D - 2
D610	B - 3
D611	D - 2
D612	E - 1
D613	A - 3
D614	E - 1
D615	F - 2
D616	D - 4
D617	A - 3
D624	F - 2
D801	C - 7
D802	B - 9
D803	F - 6
D814	E - 9
D815	B - 8
D816	A - 9
D824	E - 5
D825	E - 5
D1501	E - 9
D1502	F - 5
D1503	E - 10
D1504	F - 9
D1505	F - 5
D1506	E - 9
D2506	D - 7
D2507	E - 7
D2508	D - 6
D2509	E - 3
D2510	B - 5
D2511	C - 5
D2512	F - 4
D2515	F - 4
D2524	F - 3
D2526	F - 1
D2527	F - 1



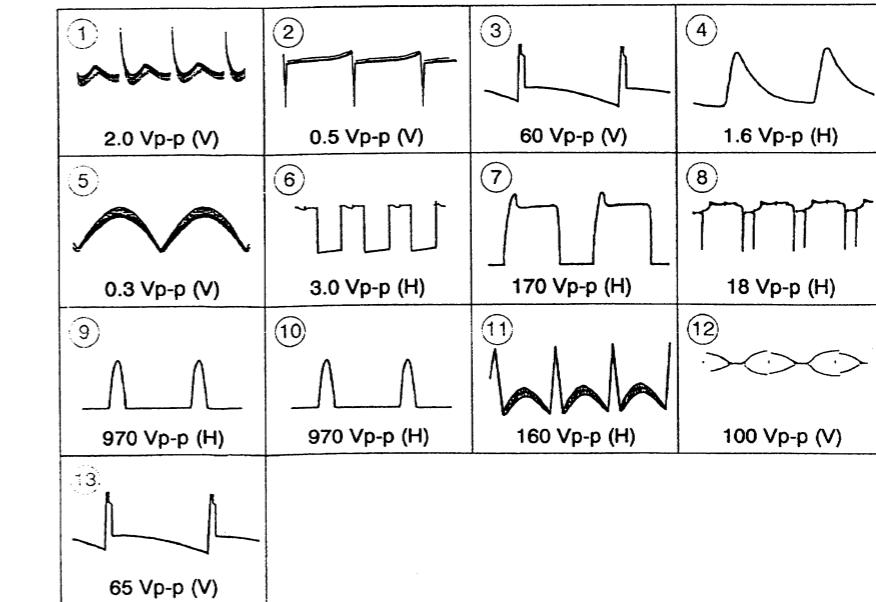
ed as left contains high voltage of over
st be paid to prevent an electric shock in
ring.

chematic Diagrams of D, F1, F2, H1 and H2 Boards

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22



- D BOARD WAVEFORM



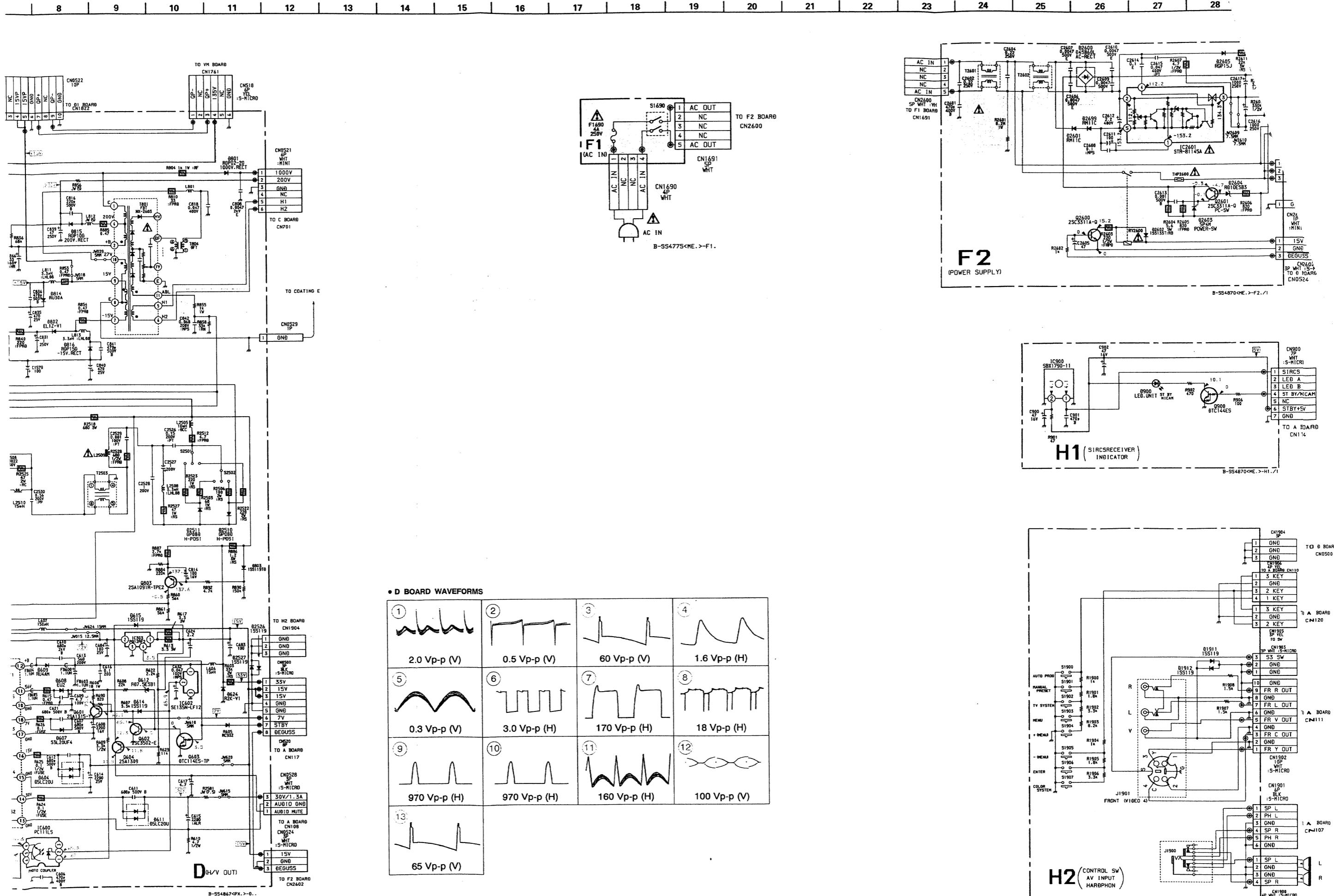
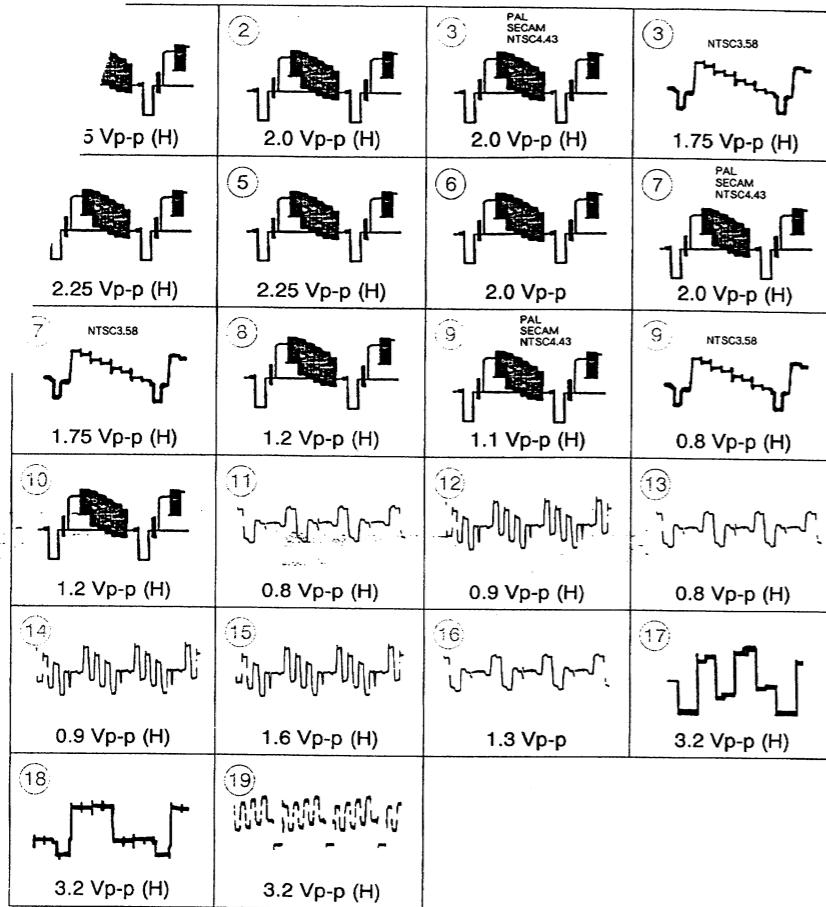
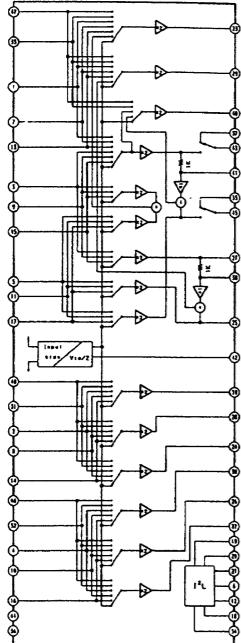


Diagram of A Board

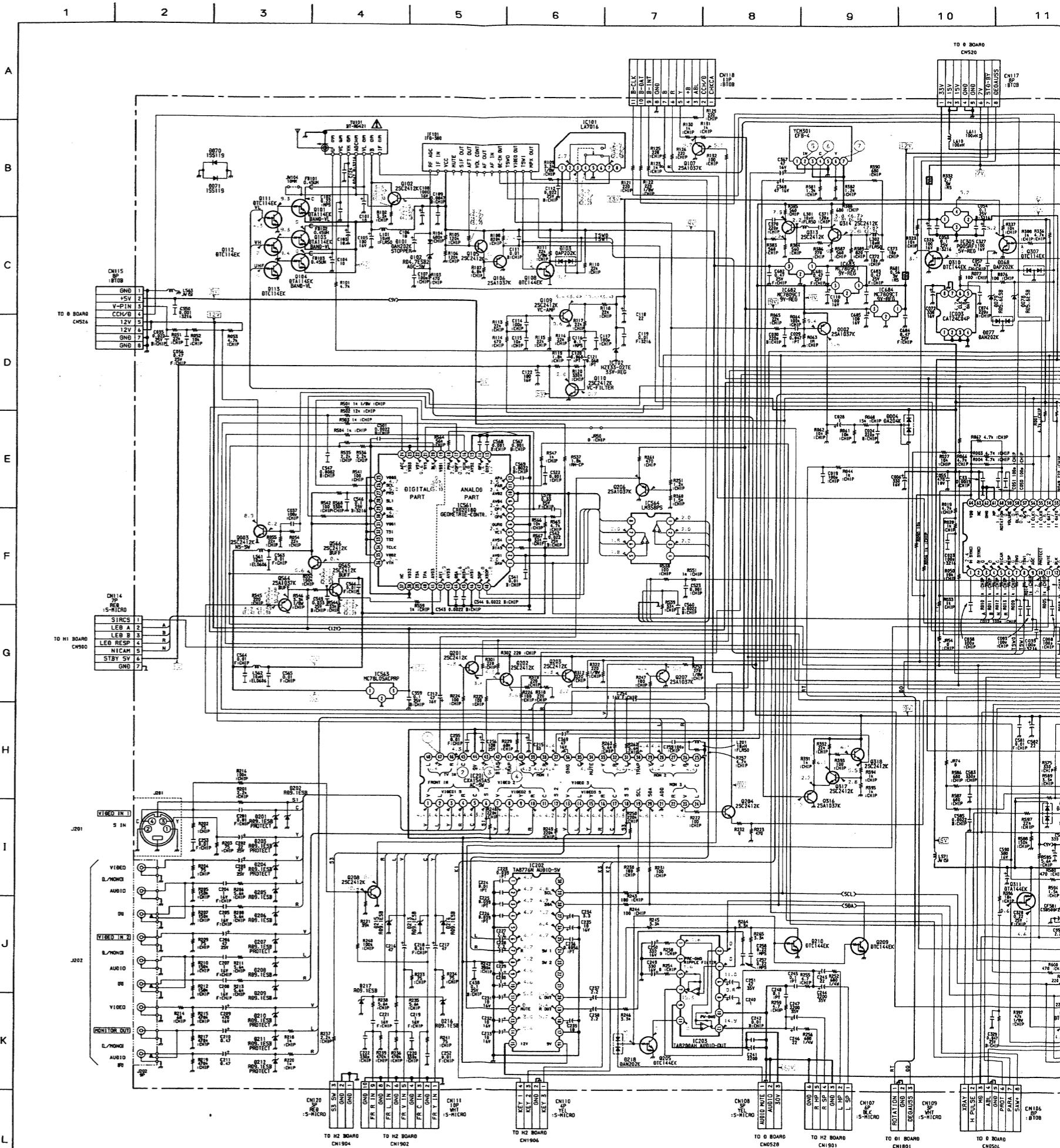
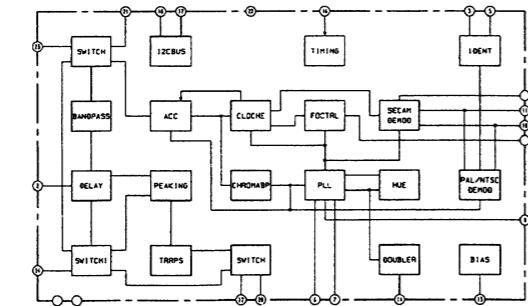
AVEFORMS



A Board IC201 CXA1545AS



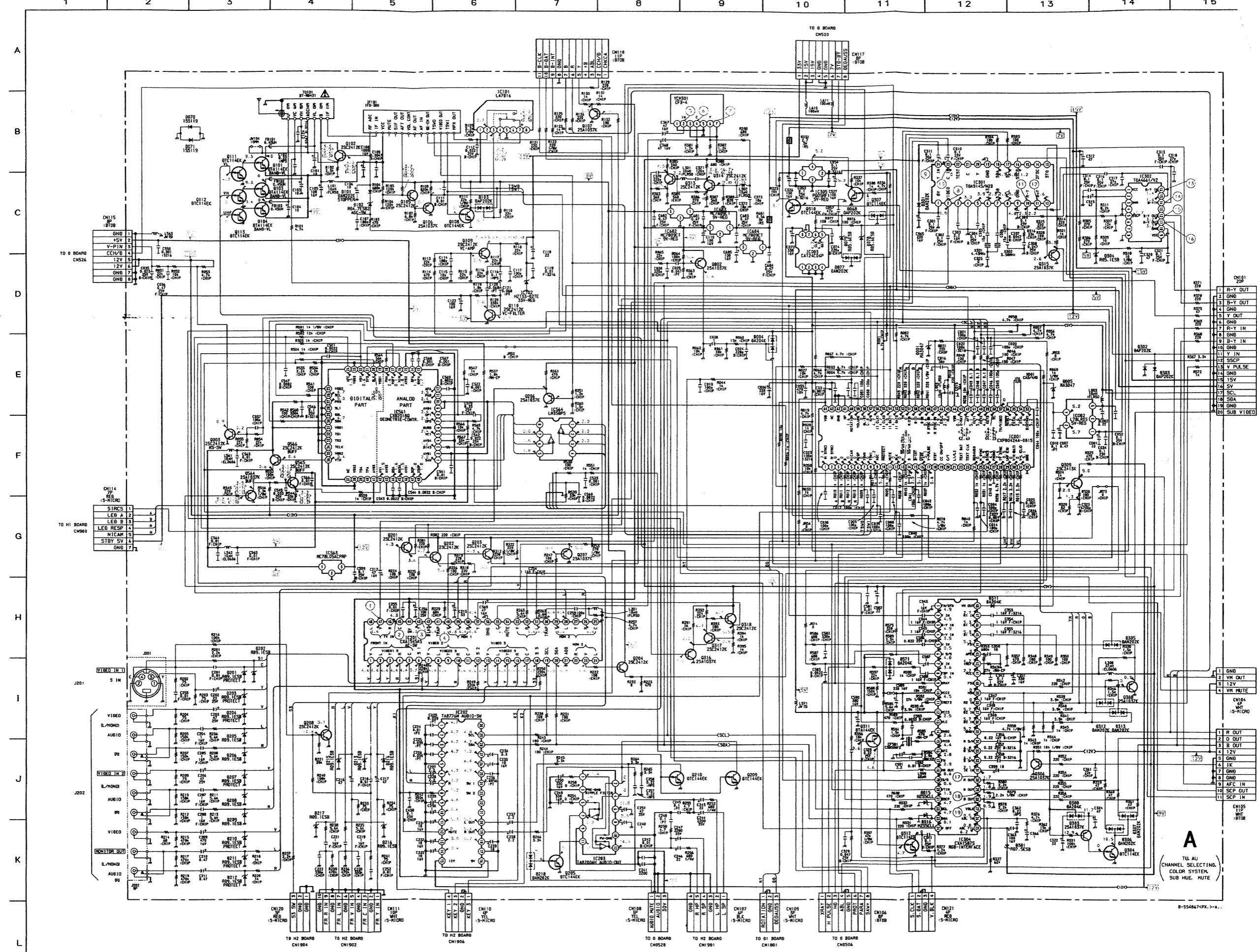
A Board IC301 TDA9145

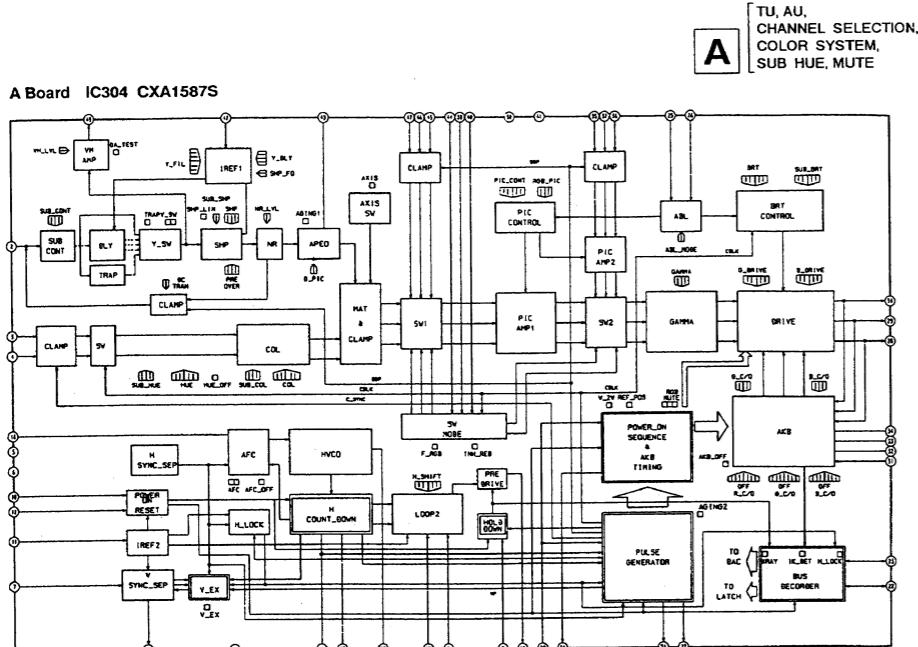


Schematic diagrams

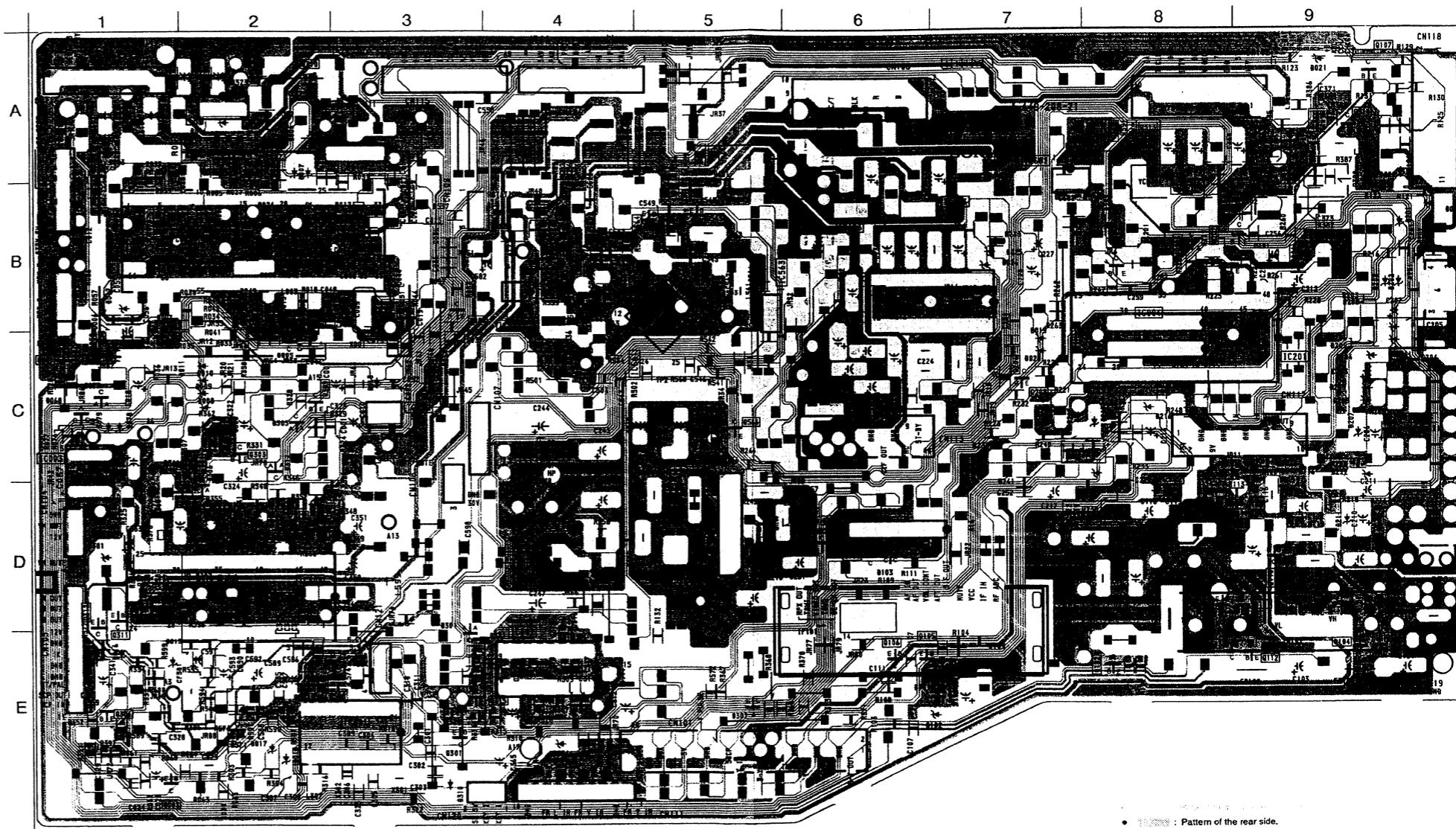
D F1 F2

H1 H2 boards





PRINTED WIRING BOARDS

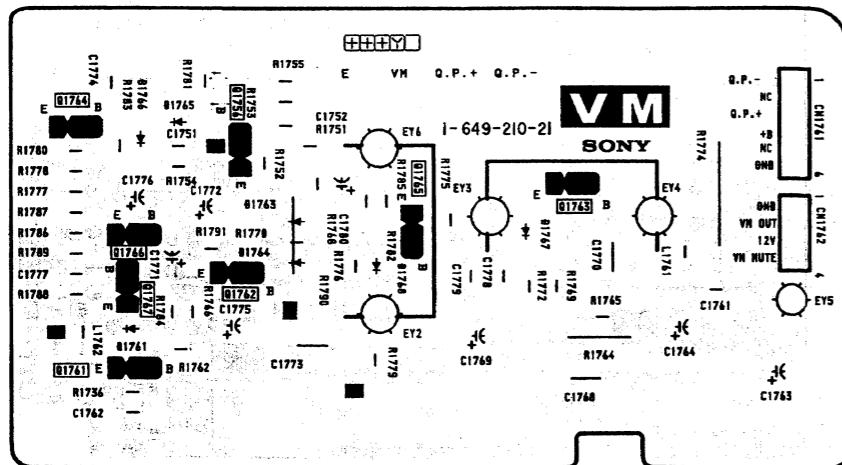


KV-K29CF1
RM-845P

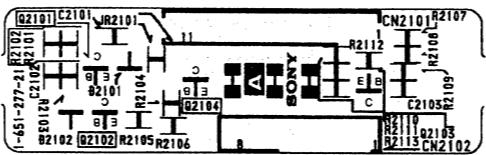
VM [VM OUT]

PRINTED WIRING BOARDS

– VM Board –



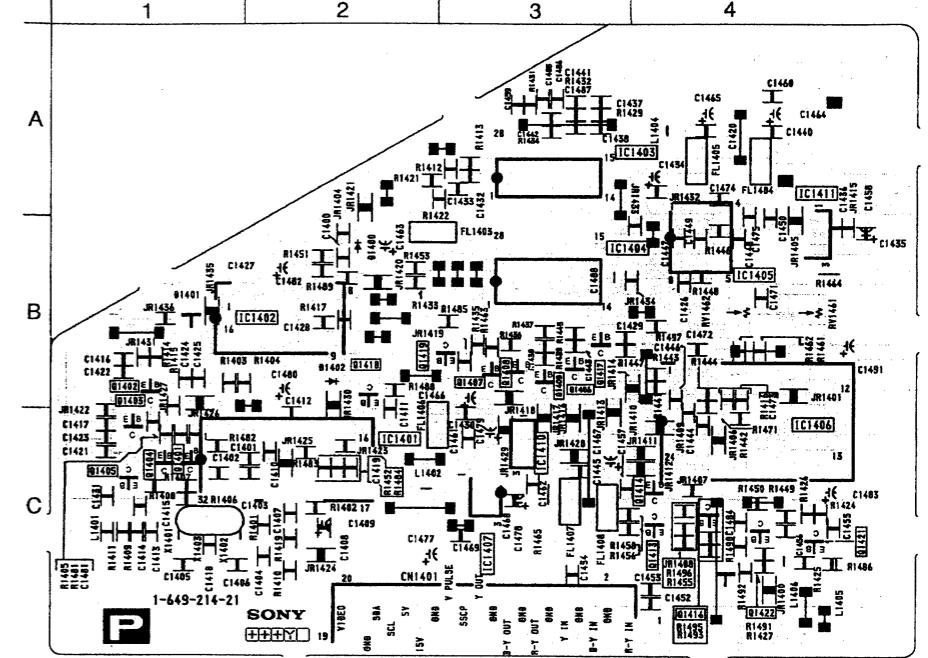
– A2 Board –



A2 [R, G, B IN/OUT,
SCP IN/OUT]

PIN P1

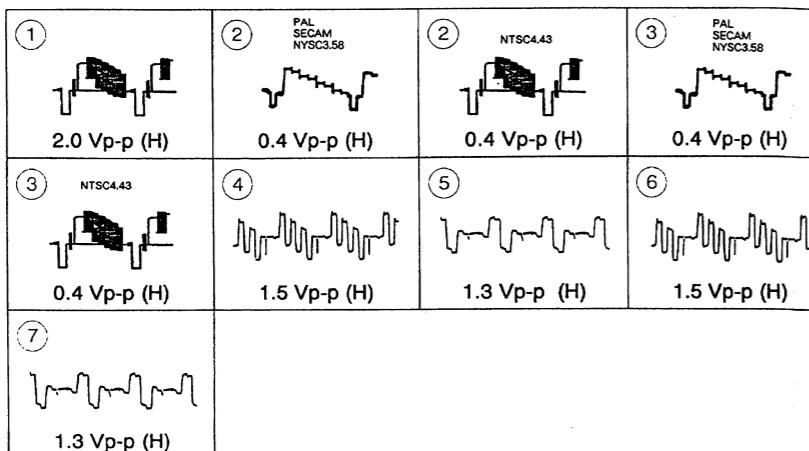
– P Board –



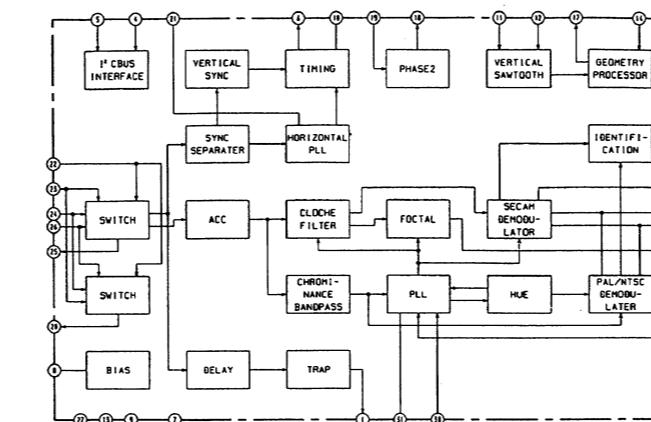
• P BOARD

IC	Q1403	C - 1	DIODE
IC1401 C - 2	Q1404	C - 1	
IC1402 B - 2	Q1405	C - 1	D1400 B - 2
IC1403 A - 3	Q1406	B - 3	D1401 B - 1
IC1404 B - 3	Q1407	B - 3	
IC1405 B - 4	Q1408	B - 3	
IC1406 C - 4	Q1409	B - 3	CRYSTAL
IC1407 C - 3	Q1413	C - 4	X1401 C - 1
IC1410 C - 3	Q1414	C - 4	X1402 C - 1
IC1411 B - 4	Q1416	C - 4	
	Q1417	B - 3	
	Q1418	B - 2	
	Q1419	B - 3	
	Q1420		
	Q1421	C - 4	
	Q1422	C - 4	

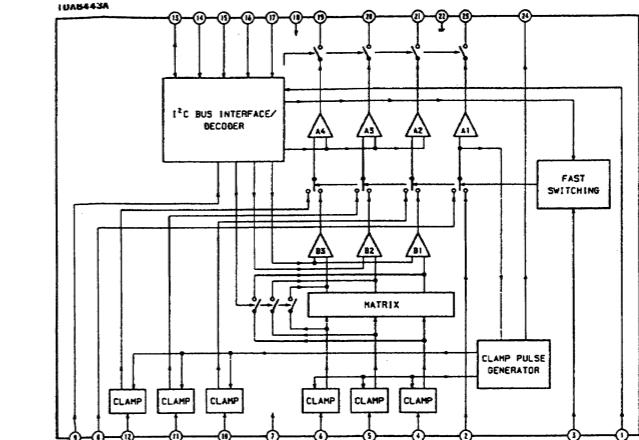
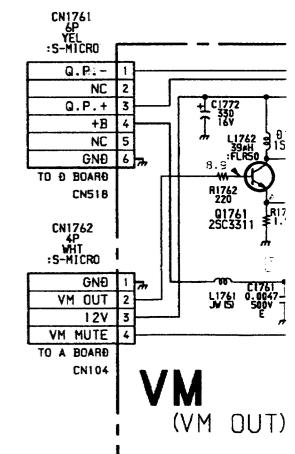
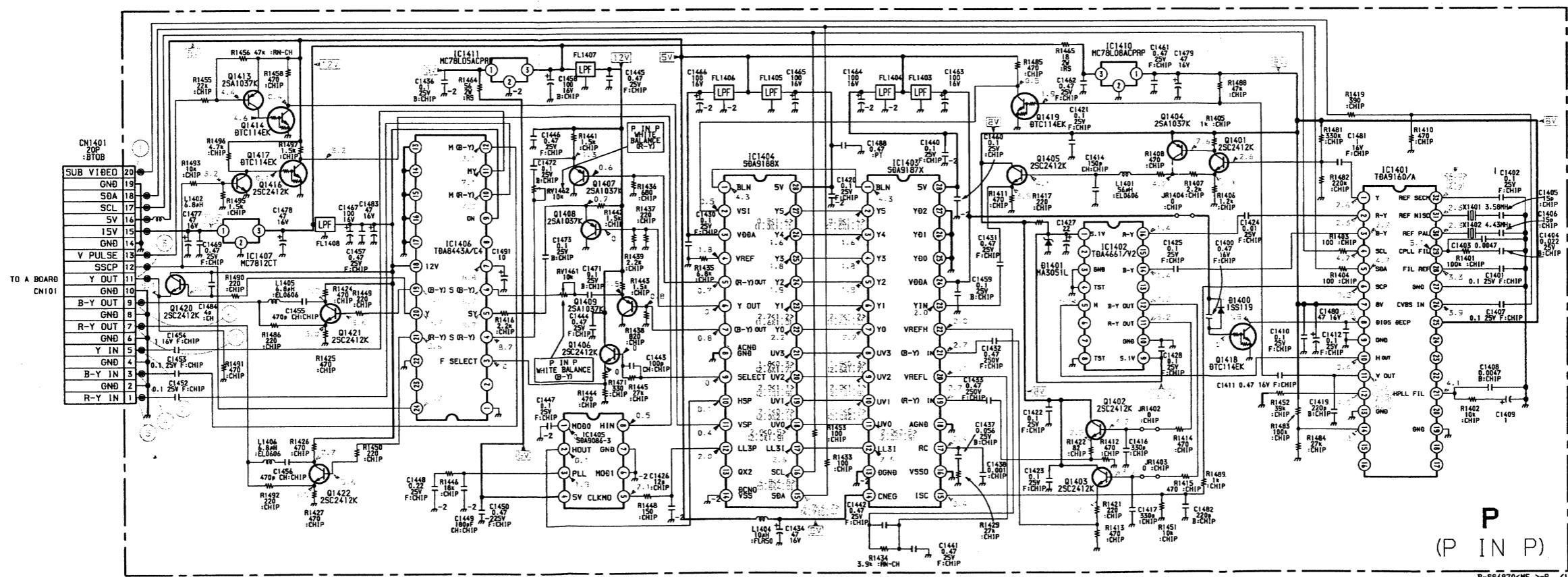
• P BOARD WAVEFORMS



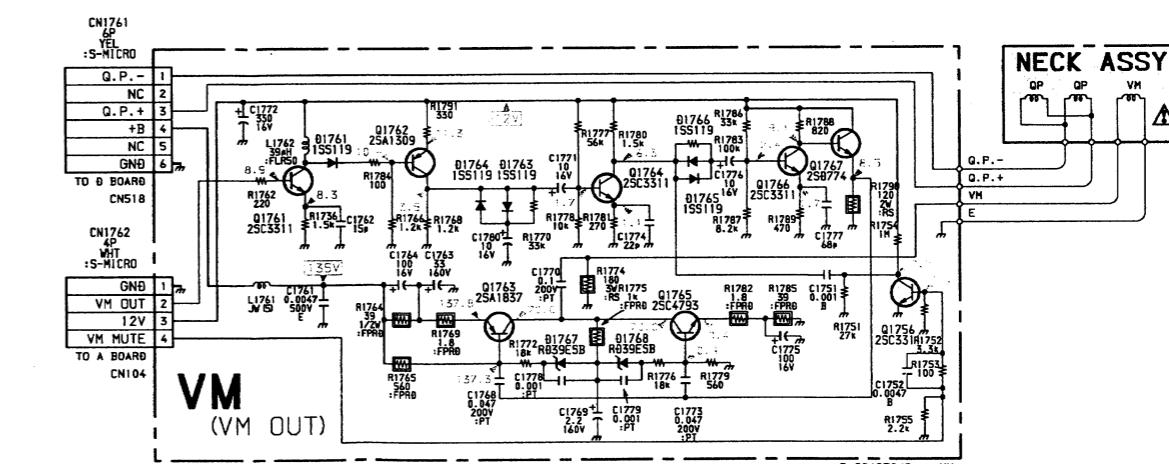
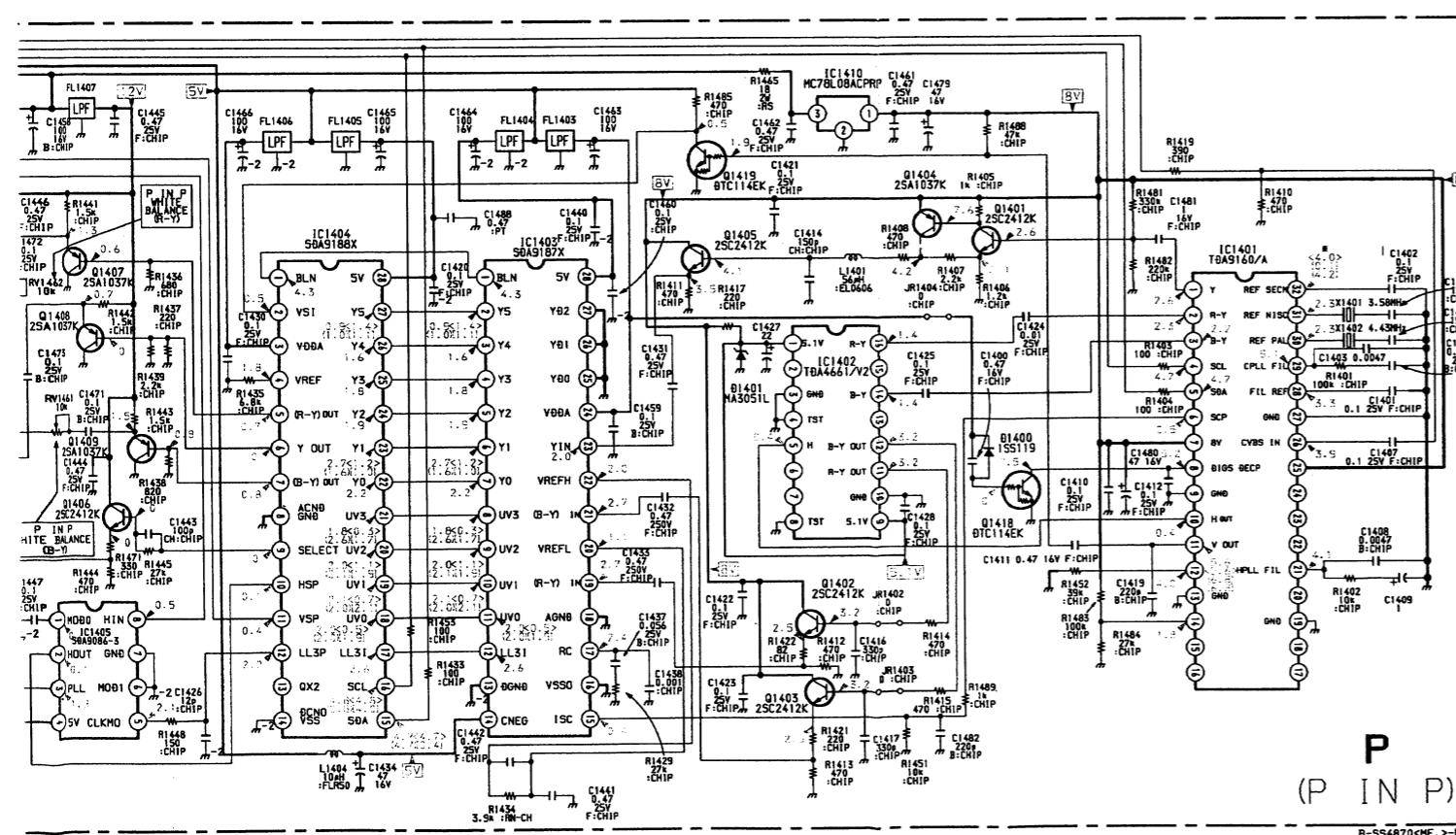
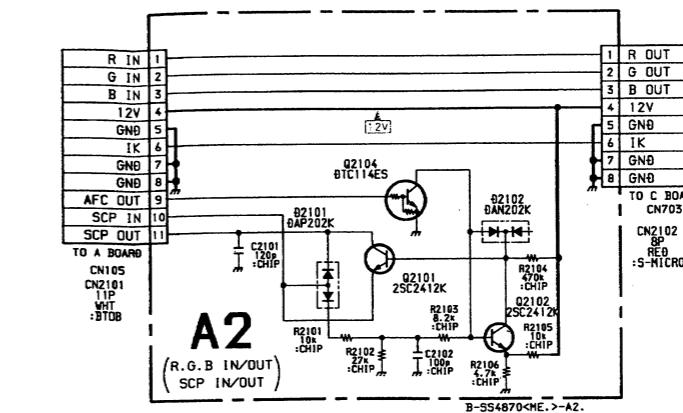
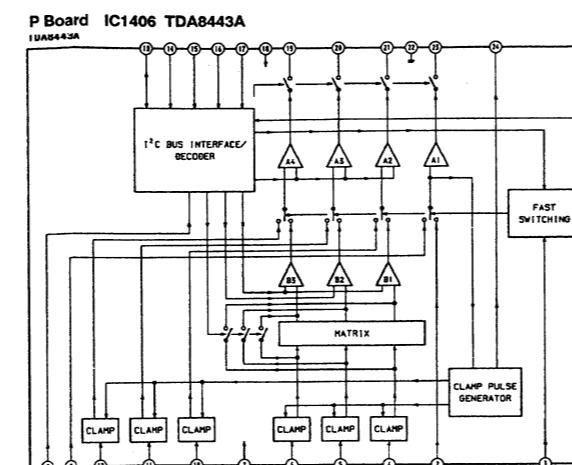
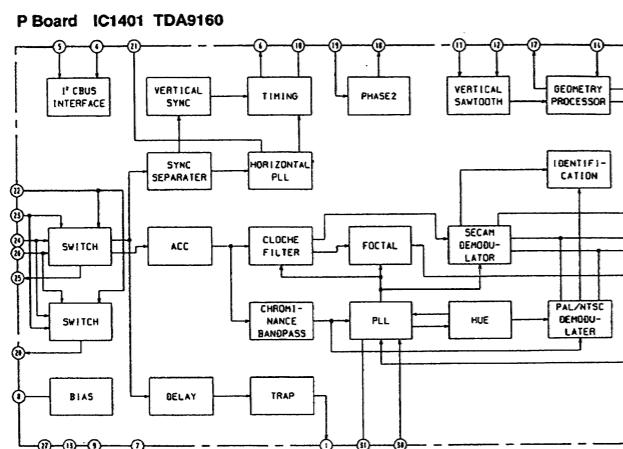
P Board IC1401 TDA9160



P Board IC1406 TDA8443A

C
D
E
F
G
H
I
J
K
L
M
N
O
PVM
(VM OUT)P
(P IN P)

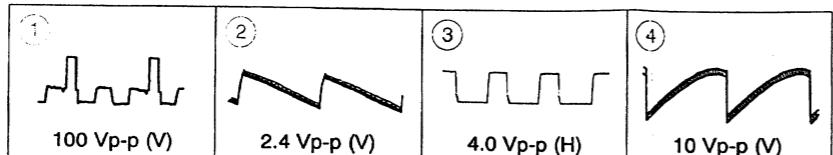
B-554870<ME.->P-1



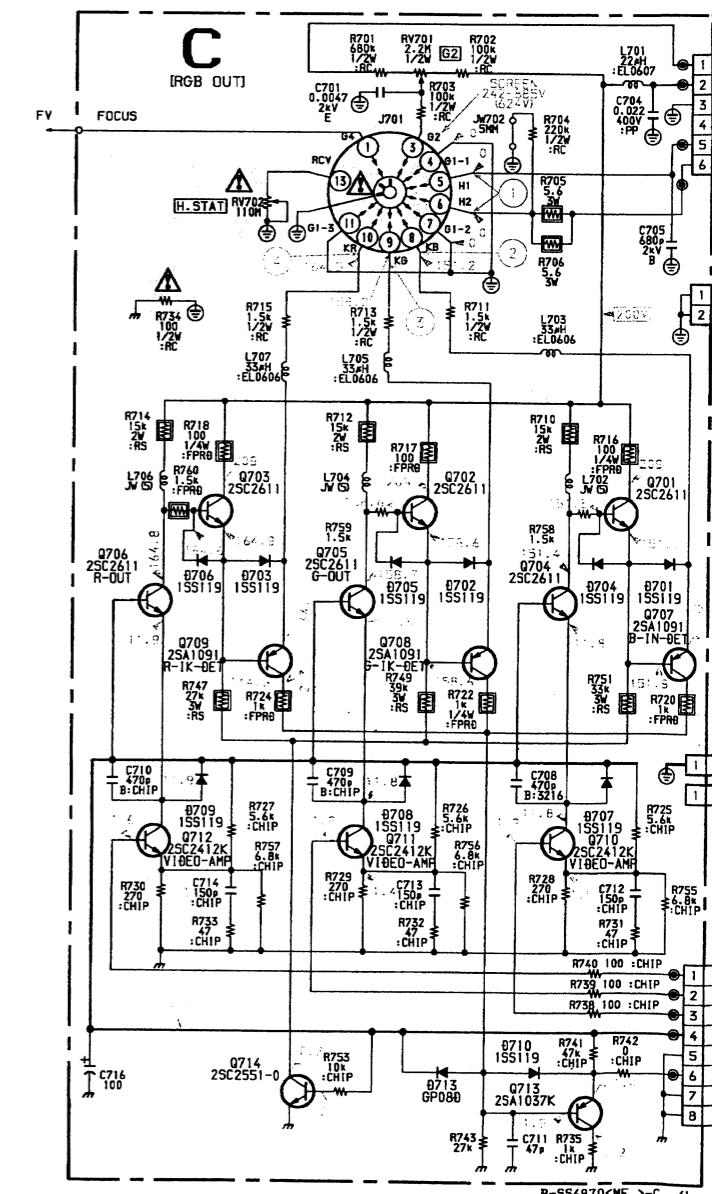
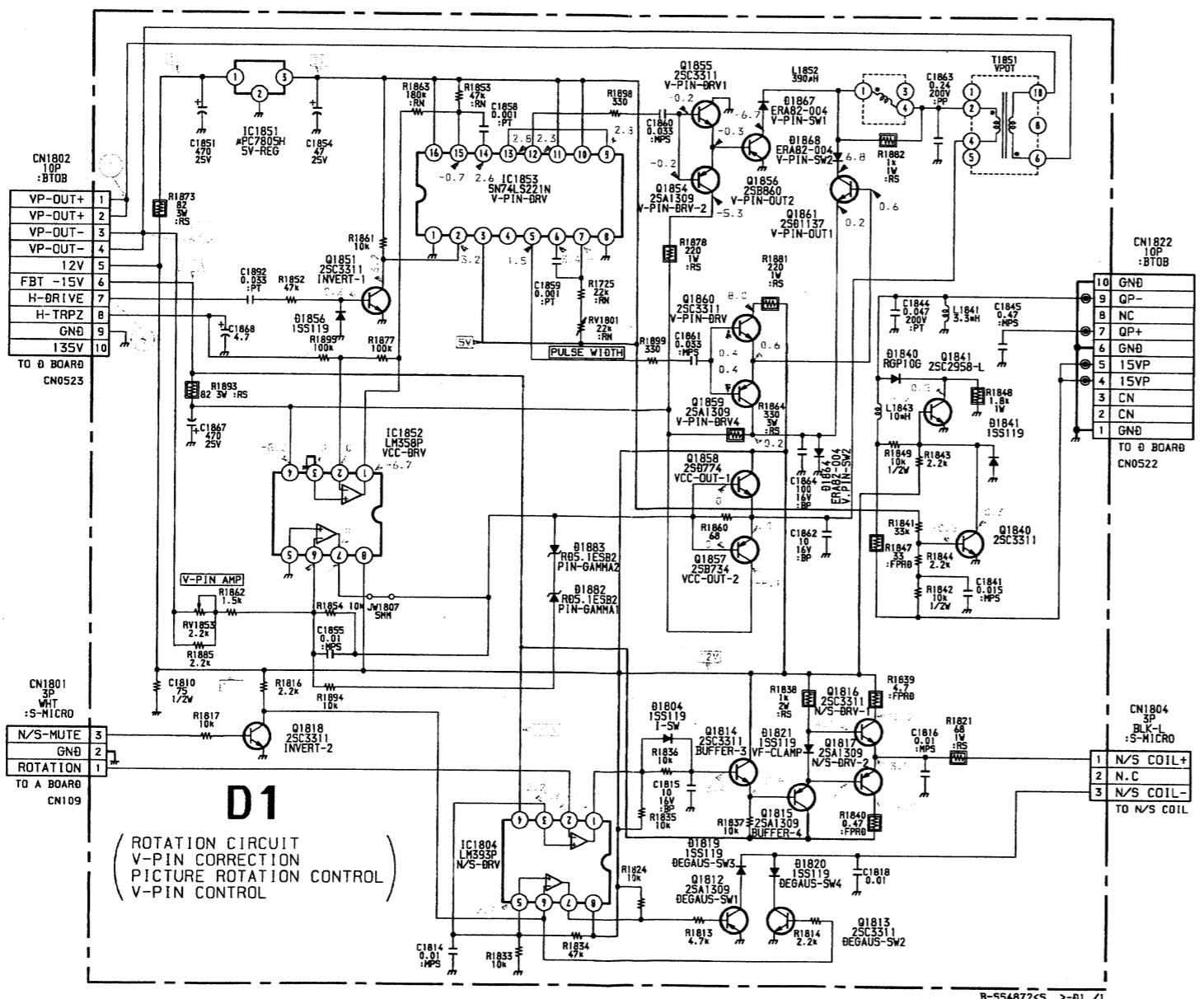
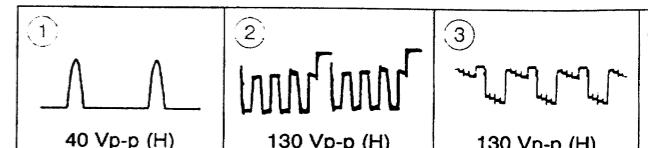
P
(P IN P)

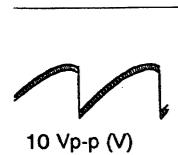
B-554870<HE. >P.../1

- D1 BOARD WAVEFORMS



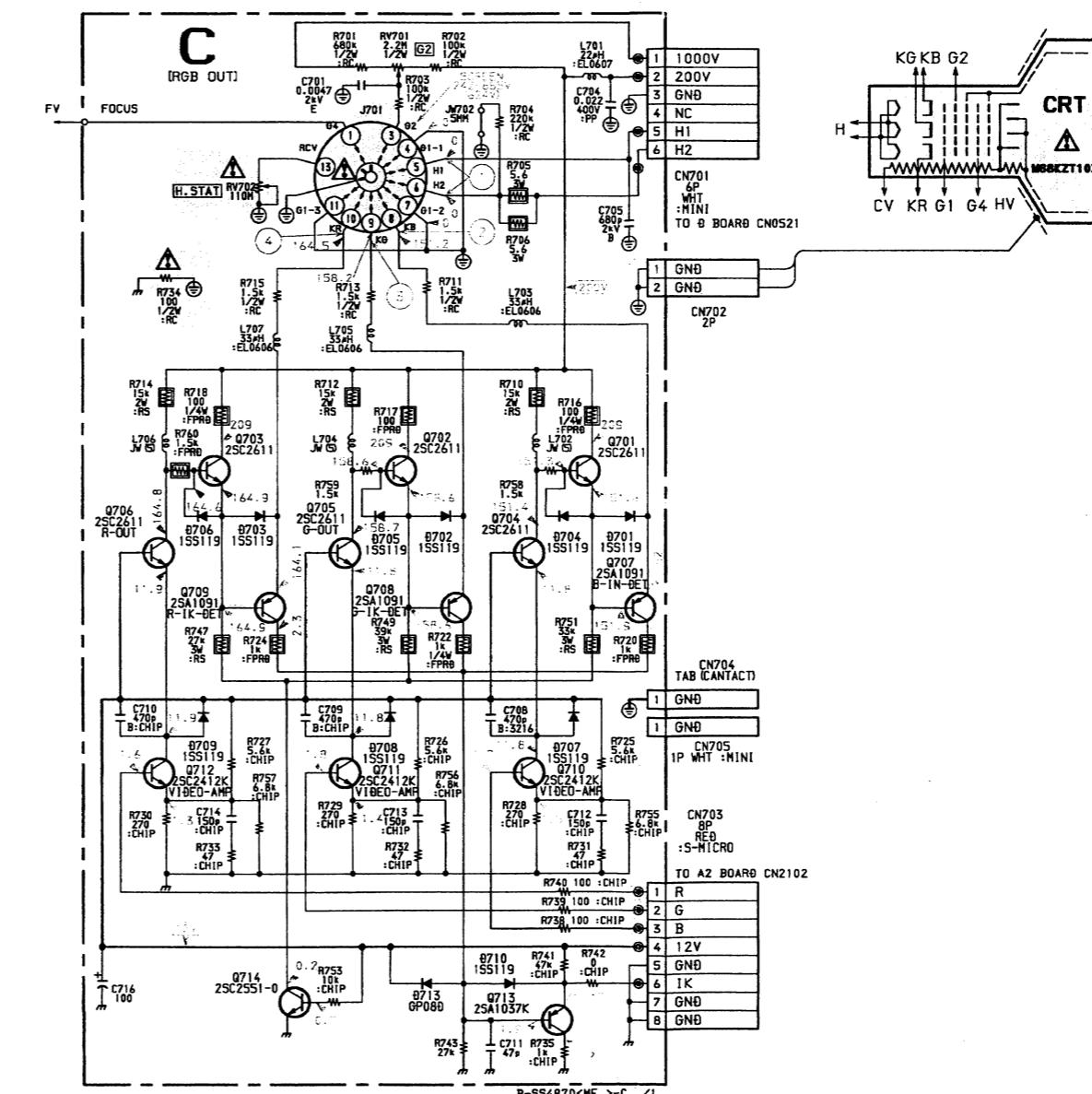
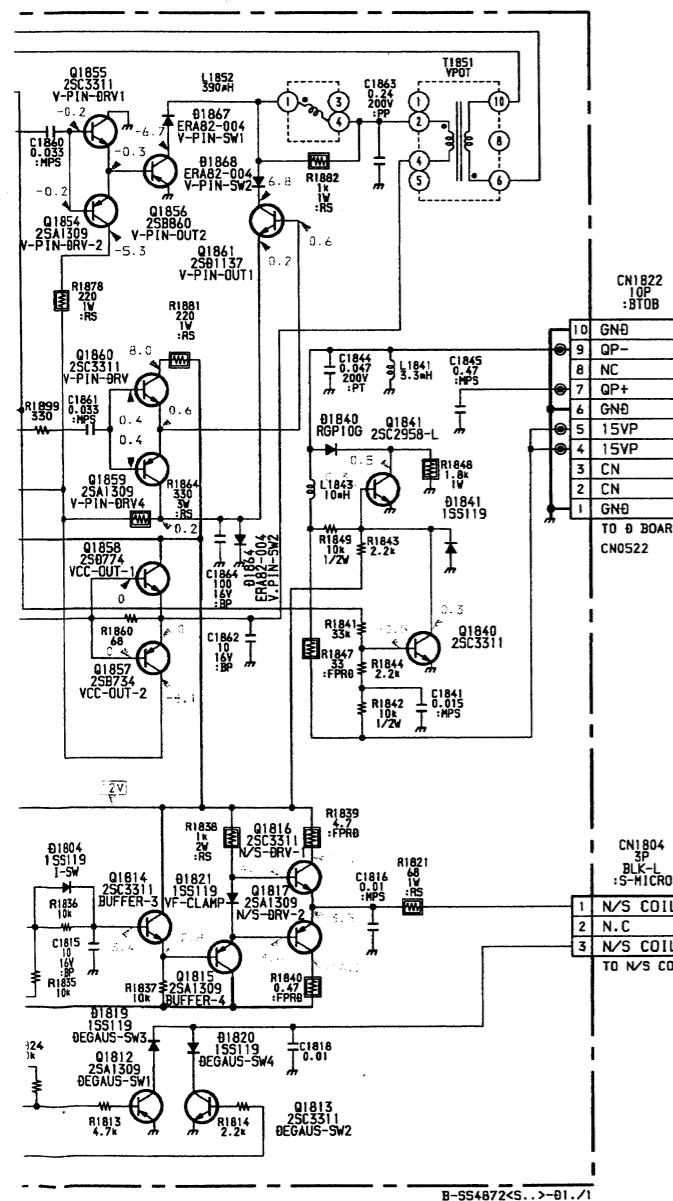
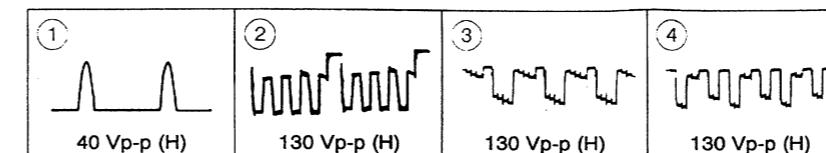
- C BOARD WAVEFORMS





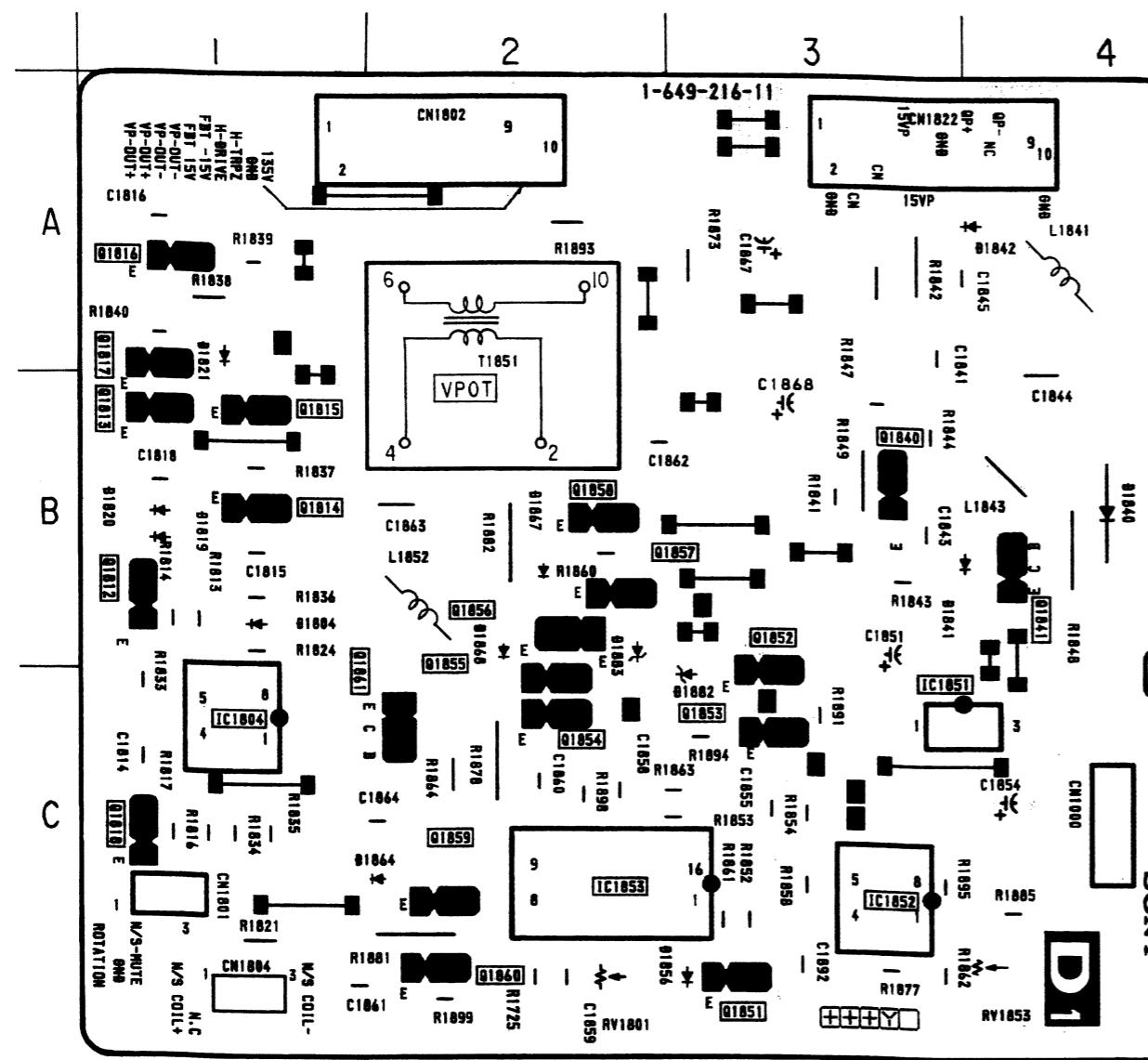
10 Vp-p (V)

• C BOARD WAVEFORMS



PRINTED WIRING BOARDS

– D1 Board –



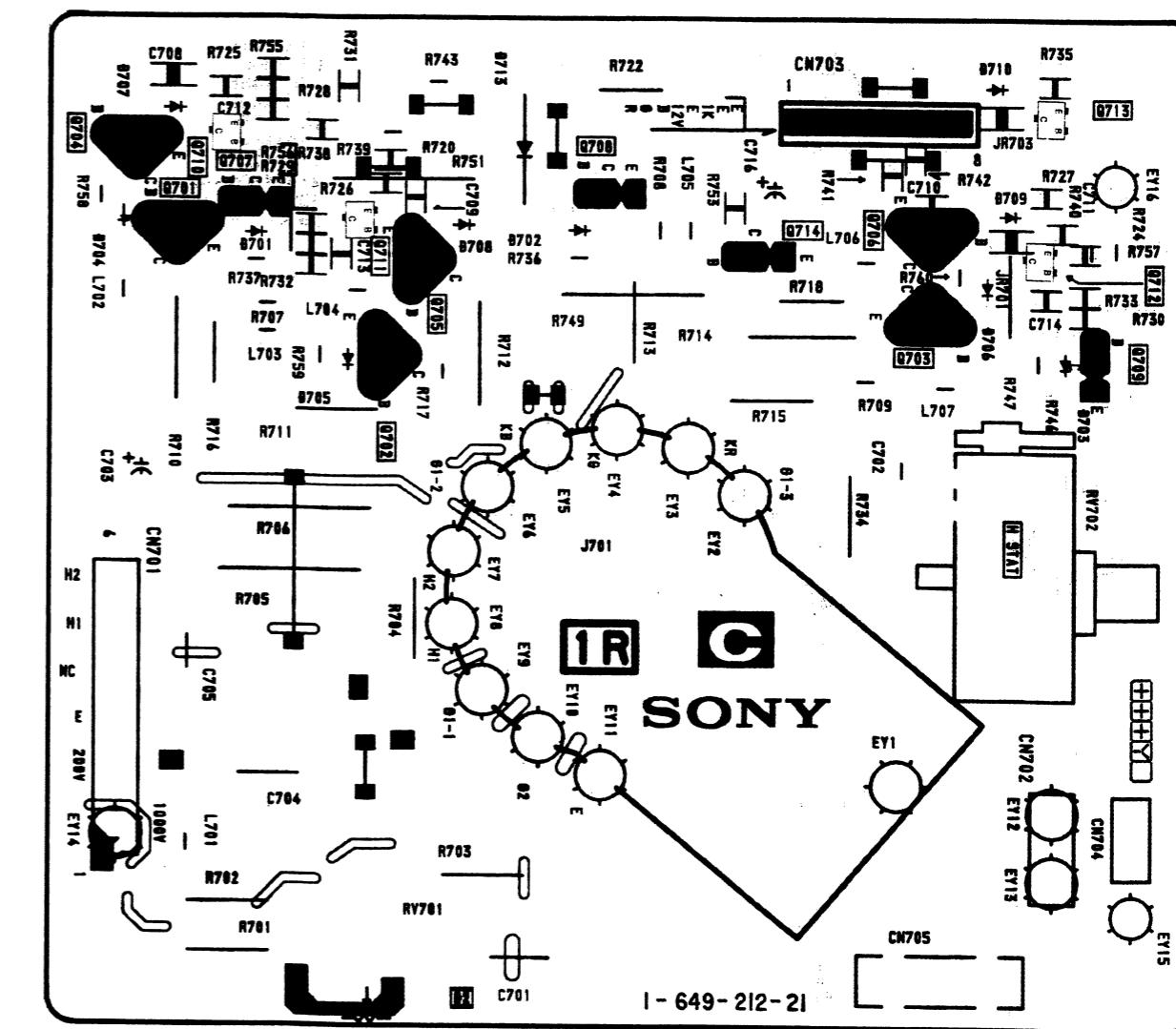
• D1 BOARD

IC	Q1851	C - 3	D1856	C - 3
	Q1854	C - 2	D1864	C - 2
IC1804	Q1855	C - 2	D1867	B - 2
C - 1	Q1856	B - 2	D1868	B - 2
IC1851	Q1857	B - 2	D1882	C - 3
C - 3	Q1858	B - 2	D1883	B - 2
IC1852	Q1859	C - 2	VARIABLE RESISTOR	
C - 3	Q1860	C - 2	RV1801	C - 2
IC1853	Q1861	C - 2	RV1853	C - 4
C - 2	DIODE			
TRANSISTOR	D1804	B - 1		
	D1819	B - 1		
Q1812	D1820	B - 1		
B - 1	D1821	A - 1		
Q1813	D1840	B - 4		
B - 1	D1841	B - 3		
Q1814				
B - 1				
Q1815				
B - 1				
Q1816				
A - 1				
Q1817				
A - 1				
Q1818				
C - 1				
Q1840				
B - 3				
Q1841				
B - 4				

1 ROTATION CIRCUIT,
V-PIN CORRECTION,
PICTURE ROTATION CONTROL
V-PIN CONTROL

C [R, G, B OUT]

– C Board

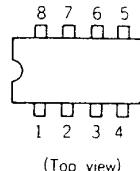


NOTE

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

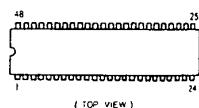
5-5. SEMICONDUCTORS

CAT24C04P
 LM393P
 LM393P
 SDA9086-3
 μ PC358C
 μ PC393C



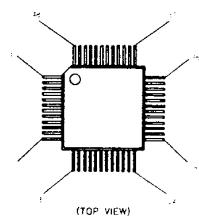
(Top view)

CXA1545AS
 CXA1587S



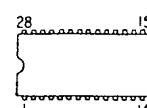
(Top view)

CXD2018Q



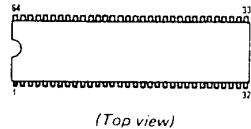
(Top view)

CXK5864BSP-10L
 MAB8461P-W220
 SAA5231/V7
 SDA9187X
 SDA9188X



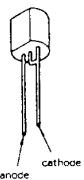
(Top view)

CXP80424
 CXP80424-SV4652

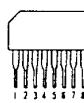


(Top view)

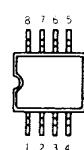
HZT33-02TE
 μ PC574J



LA7016

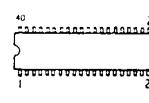


LM358PS



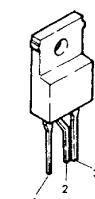
(TOP VIEW)

SAA5243P/T



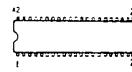
(Top view)

SE135N-LF12



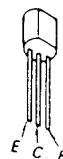
1. V_{out}
 2. V_{in}
 3. GND

TDA8204
 TDA8205

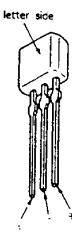


(Top view)

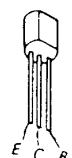
2SA1091-O
 2SC2551-O



2SA1175-HFE
 2SA1309A
 2SC2785-HFE
 2SC3311A



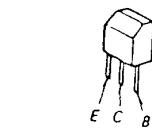
2SA1315-Y



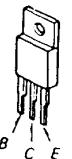
2SA1837



2SB734-34
 2SC2958-L
 2SD774-34



2SB858-C
 2SB860
 2SD2012
 2SD2061-EF



L78LR05D-MA



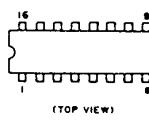
MC78L05ACPRP
 NJM78L05A



MC7809CT
 MC7812CT
 NJM78M09FA
 TA7805S
 μ PC7805H

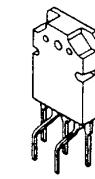


SN74LS221N
 TDA4661/V2
 TDA9821

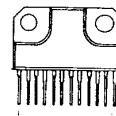


(TOP VIEW)

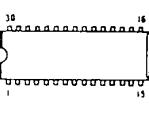
STR-81145A



TA8200AH

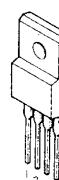


TA8776N

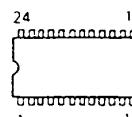


(Top view)

PQ05RF1



TDA8443A/C4
 TDA9145
 TDA9145/N2B

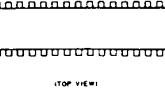


24 13

1 12

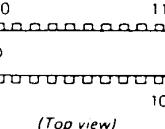
(Top view)

TDA9160A



(TOP VIEW)

TDA9840

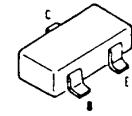


20 11

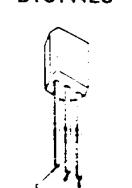
1 10

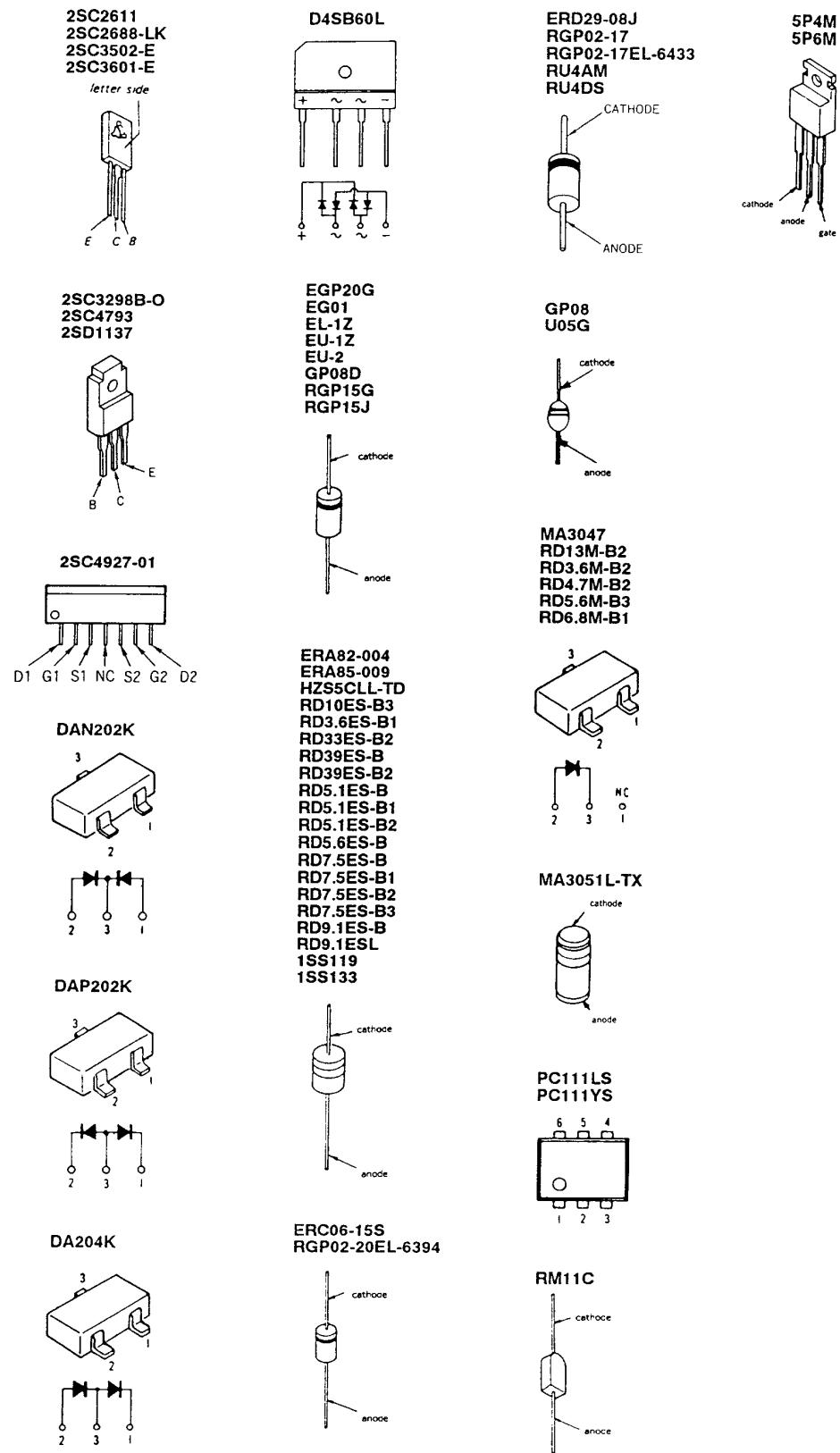
(Top view)

DTA114EK
 DTA144EK
 DTC114EK
 DTC144EK
 2SA1037K
 2SA1162-G
 2SC1623-L5L6
 2SC2412K
 2SC2412K-QR
 2SC2413K
 2SC2413KQ



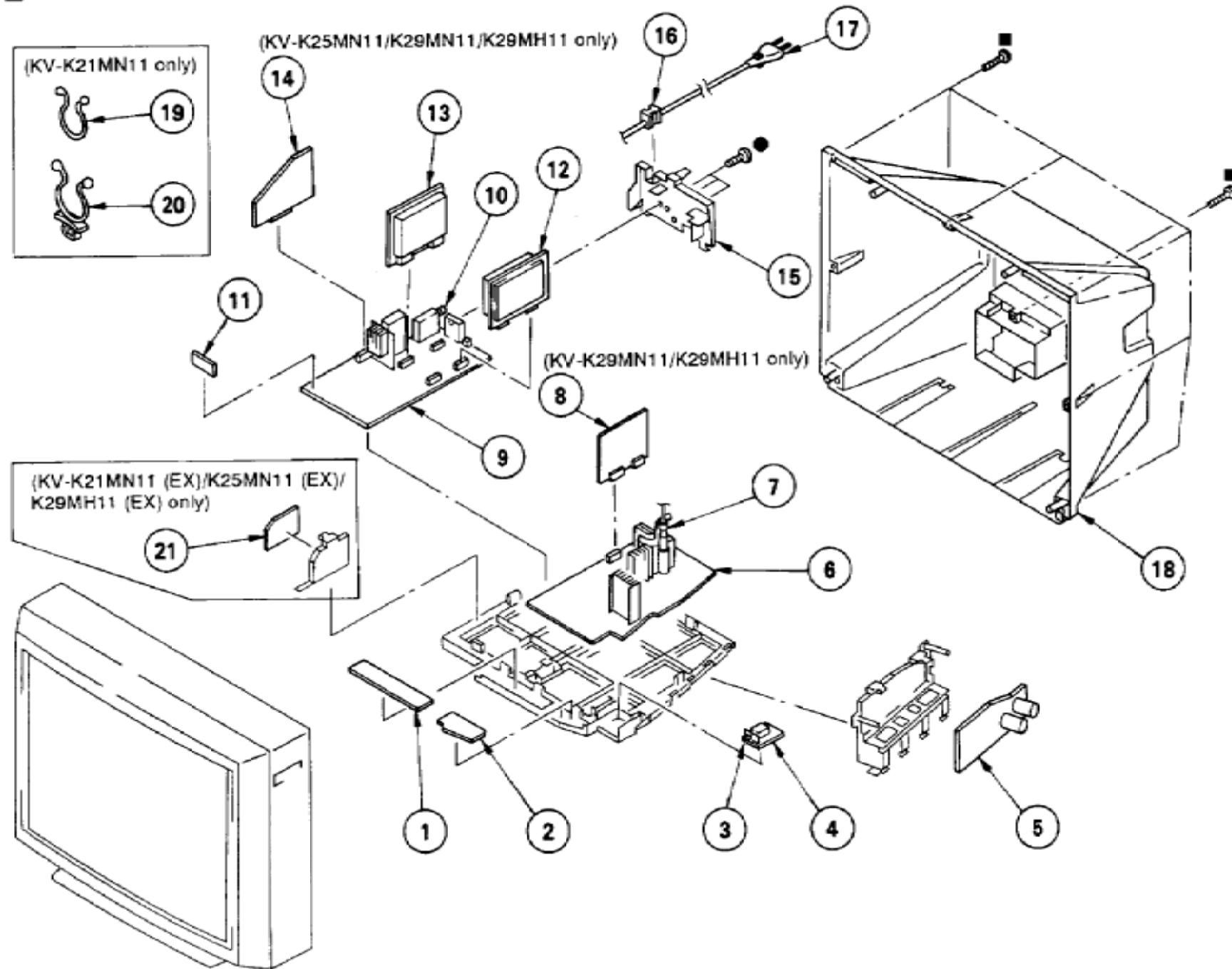
DTC114ES
 DTC144ES





6-1. CHASSIS

- : BVTP3 × 12 7-685-648-79
- : BVTP4 × 16 7-685-663-79



6-2. PICTURE TUBE

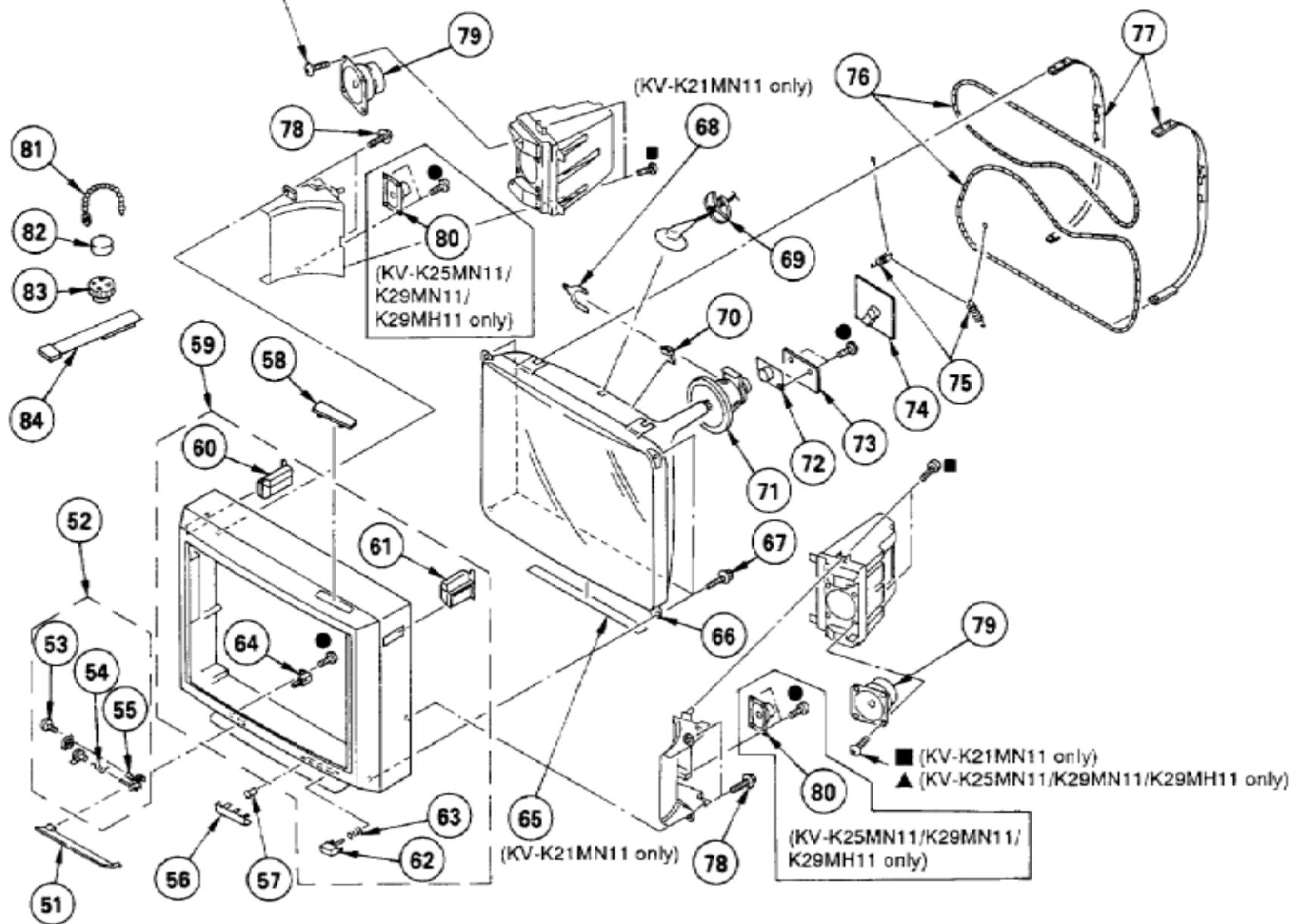
●: BVTP3 × 12 7-685-648-79

▲: BVTP4 × 12 7-685-661-14

■: BVTP4 × 16 7-685-663-79

■ (KV-K21MN11 only)

▲ (KV-K25MN11/K29MN11/K29MH11 only)



SONY. SERVICE MANUAL

G3F CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-K21MN11	RM-845T	ME EX	SCC-G37B-A SCC-G50A-A
KV-K25MN11	RM-845P	ME (Serial No. 1,002,051 and later) EX	SCC-G37A-A SCC-G50B-A

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-K29MH11	RM-845	HK	SCC-G43A-A (Serial No. 1,025,772 and later)
KV-K29MN11	RM-845P	GE	SCC-G44A-A (Serial No. 1,021,151 and later)

SUPPLEMENT-4

SUBJECT : 1. CHANGE OF F2 BOARD
2. CHANGE OF IC601 ON D BOARD

File this supplement with the service manual.

Note:

- All capacitors are in μ F unless otherwise noted. pF: $\mu\mu$ F 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
 $k\Omega = 1000\Omega$, $M\Omega = 1000K\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm

Rating electrical power $1/4$ W (CHIP: 1/10W)

-  : nonflammable resistor.
-  : internal component.
-  : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input.
no mark: PAL
(): SECAM
(): NTSC 3.58
(): NTSC 4.43
- Readings are taken with a 10 $M\Omega$ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- * : Can not be measured.
- Circle numbers are waveform reference.

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: 	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE



MICROFILM

SONY. SERVICE MANUAL

G3F CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-K21MN11 RM-845T	ME EX		SCC-G37B-A SCC-G50A-A	KV-K29MH11 RM-845	HK	SCC-G43A-A	
KV-K25MN11 RM-845P	ME EX		SCC-G37A-A SCC-G50B-A		(Serial No. 1,026,272 and later)	(Serial No. 1,426,272 and later)	
				KV-K29MN11 RM-845P	GE	SCC-G44A-A	
					(Serial No. 1,020,451 and later)	(Serial No. 1,023,851 and later)	

SUPPLEMENT-6

SUBJECT 1 : CHANGE OF PICTURE TUBE
2 : CHANGE OF COMPONENT VALUE ON VM AND D BOARDS

File this supplement with the Service Manual.

INTRODUCTION:

- On KV-K29MH11/KV-K29MN11 listed above shows 2 lines of serial numbers.

The serial numbers on the first line are the sets with the new CRTs. Those on the second line are the sets with the new VM boards.

<u>PART NO.</u>	<u>DESCRIPTION</u>
▲ 8-733-866-05	PICTURE TUBE (KV-K29MN11 GE only)
▲ 8-733-867-05	PICTURE TUBE (KV-K29MH11 HK only)

PARTS CHANGE : VM BOARD

<u>REF. NO.</u>	<u>PARTS NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	
C1751	1-102-107-00	CERAMIC	120PF	10% 50V
C1752	not mount			
D1765	not mount			
D1766	not mount			
JW213	1-249-393-11	CARBON	10	5% 1/4W
Q1767	8-729-142-86	TRANSISTOR 2SC3733		
R1774	1-215-912-11	METAL OXIDE	150	5% 3W
R1753	1-249-421-11	CARBON	2.2K	5% 1/4W
R1783	1-535-303-00	LEAD, JUMPER (5.0MM)		
R1788	1-249-417-11	CARBON	1.0K	5% 1/4W

PARTS CHANGE : D BOARD

<u>REF. NO.</u>	<u>PARTS NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	
C2519	1-136-611-11	FILM	16000PF	3% 1.4KV
C2548	1-161-754-00	CERAMIC	1000PF	10% 3KV



MICROFILM

SONY SERVICE MANUAL

G3F CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-K21MN11 RM-845T	ME	SCC-G37B-A		KV-K29MH11 RM-845	HK	SCC-G43A-A	
KV-K21MN11 RM-845T	EX	SCC-G50A-A		KV-K29MN11 RM-845P	GE	SCC-G44A-A	
KV-K25MN11 RM-845P	ME	SCC-G37A-A					
KV-K25MN11 RM-845P	EX	SCC-G50B-A					

CORRECTION- 2

SUBJECT: PART CHANGE

File this correction with the Service manual.

INTRODUCTION: Corrected the FBT part no. (KV-21MN11 only)

█ :Indicates corrected portion

SECTION 6. EXPLODED VIEWS

6-1.CHASSIS (See page 70)

REF NO.	PART NO.	DESCRIPTION
7	△P50H2200	TRANSFORMER, FLYBACK (NO. 201 AND 202 IN KV-21MN11 only)

ELECTRICAL PARTS LIST

D BOARD (See page 90)

REF NO.	PART NO.	DESCRIPTION
T801	△P50H2200	TRANSFORMER, FLYBACK (NO. 201 AND 202 IN KV-21MN11 only)



9-965-527-92

※ Please file according to model size. ■

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SONY SERVICE MANUAL

G3F CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KV-K21MN11	<i>RM-845T</i>	ME EX	SCC-G37B-A SCC-G50A-A	KV-K29MH11	<i>RM-845</i>	HK	SCC-G43A-A (Serial No. 1,025,772 and later)
KV-K25MN11	<i>RM-845P</i>	ME EX	SCC-G37A-A SCC-G50B-A	KV-K29MN11	<i>RM-845P</i>	GE	SCC-G44A-A (Serial No. 1,019651 and later)

SUPPLEMENT-5

SUBJECT KV-K29MH11, KV-K29MN11
1 : CHANGE OF PICTURE TUBE
2 : CHANGE OF D1 BOARD
3 : CHANGE OF NECK ASSY AND DY

File this supplement with the Service Manual.

INTRODUCTION:

- On KV-K29MH11/KV-K29MN11 the following new parts numbers are introduced to the models serial numbers listed above and later.

PART NO.	DESCRIPTION
8-733-859-05	PICTURE TUBE
A-1346-473-A	D1 BOARD COMPLETE
1-452-762-31	NECK ASSY PICTURE TUBE (NA294)
8-451-467-21	DEFLECTION YOKE (Y29GX2A)

Note on replacement of CRT:

- For those sets prior to the serial numbers listed above, be sure to use the picture tube : 8-733-854-05 for replacement.
- Especially on replacing CRTs of the following serial numbers sets, check if the label on the tube shows [9GB] and if no tape is applied around the CRT neck of the Neck Assy. In this case, be sure to replace the Neck Assy with 1-452-509-12 at the same time as the CRT.

MODEL	DEST.	SERIAL NO.
KV-K29MH11	HK	1,025,703 to 1,025,771



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G3F CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-K21MN11 RM-845T	ME	SCC-G37B-A		KV-K29MH11 RM-845	HK	SCC-G43A-A	
KV-K21MN11 RM-845T	EX	SCC-G50A-A		KV-K29MN11 RM-845P	GE	SCC-G44A-A	
KV-K25MN11 RM-845P	ME	SCC-G37A-A					
KV-K25MN11 RM-845P	EX	SCC-G50B-A					

SUPPLEMENT- 7

SUBJECT: PART CHANGE

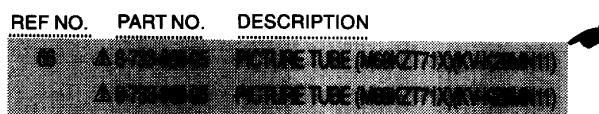
File this supplement with the Service manual.

INTRODUCTION: Change the CRT part no. (KV-K29MH11/K29MN11 only)

█ :Indicates changed portion

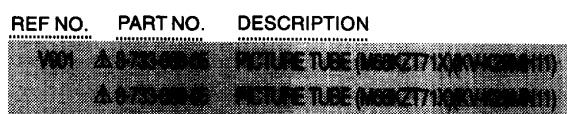
SECTION 6. EXPLODED VIEWS

6-2.PICTURE TUBE (See page 71)



ELECTRICAL PARTS LIST

MISCELLANEOUS (See page 94)



9-965-527-87

※ Please file according to model size. ■

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